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Murder Trial.—Death from Strychnine. Tried before Hon. WM. LAWRENCE, Judge. Reported by Judge LAWRENCE and Prof. T. G. WORMLEY, M.D., of Starling Medical College, Columbus, Ohio.

COURT OF COMMON PLEAS OF UNION COUNTY, OHIO—APRIL TERM, 1864—STATE OF OHIO *vs.* LOTHROP CONVERSE.

The defendant is indicted jointly with Mary Freet, for the murder of Wm. Freet by strychnine poison, alleged to have been administered February 13, 1863.

Mary Freet was tried at March Term, 1864, and a report of the case is published in the XVI. Vol. of the (Columbus) "Ohio Medical and Surgical Journal," 95–191, March and May Nos., 1864.

The evidence in this case against *Lothrop Converse*, is in most respects substantially as there published.

John B. Coats and *John D. Van Deman*, for the State.

Chauncey N. Olds, James W. Robinson, and *P. B. Case*, for the Defendant.

During the progress of the examination of Mary Freet as a witness, counsel for defendant asked this question—

"State whether after the return of Wm. Freet [the deceased] from Harper's, on that day [February 13, 1863], he had any con-

versation with you in which you understand him to refer to his own death."

Van Deman, for State, objected, and cited Van Deman *v.* Turner, 12 Pick. 532; Gray *v.* Goodrich, 7 Johns R. 95; State *v.* Ridgley, 2 Harris and McHenry, 120; Wilson *v.* Boerem, 15 Johns, 286; Kirby *v.* State, 9 Yerger, 383; Strange *v.* Donahue, 4 Ind. 327; Croff *v.* Ballinger, 18 Ill. 200; State *v.* Shelton, 2 Jones (Law) N. C. 360.

He then reviewed the cases cited in State *v.* Freet, XVI. Col. Med. and Surg. Jour. 110.

Olds, contra, cited State *v.* Freet, above referred to.

By the court: The object of this question is to elicit evidence that Wm. Freet made declarations tending to show an intention to commit suicide.

While it is urged on one side, that no decided case or elementary treatise can be found to authorize such evidence, it is properly said on the other, that none can be found denying its competency. We are left in doubt therefore whether the question is so clearly competent as never to have been objected to, or so clearly incompetent as never to have been insisted on.

The question is, therefore, left to be decided on principle.

If it could be shown that Freet voluntarily took poison, that would be competent as an act consummated.

The evidence of an intention, not consummated by an act, would of course be less satisfactory, because, if it could be proved by declarations, the purpose might never be carried into execution.

Such declarations lack the solemnity and sanction of an oath; they are sought to be used on an issue to which Freet is not a party, and they are not explanatory of or accompanying any act done so as to become a part of the *res gestae*, and as the evidence is offered to bind the *State* without having these sanctions, or falling within these principles, its competency is by no means free from difficulty. Such evidence certainly would not be competent to prove any *external fact*, for, as to *that*, it would not rise above the dignity of hearsay.

It will readily be conceded that it is a material inquiry to know whether Freet committed suicide. Whether he did so or not is a *fact*, and that fact is more or less probable, as he did or did not have a *purpose* to commit suicide.

If he had, shortly before his death, made his last will and testament, paid his debts, and made the arrangements which men, conscious of approaching dissolution, usually make, these would be *facts* competent to be considered in determining whether he expected death from natural causes, or intended to die by his own hand; these would rest upon the same ground as the voluntary taking of poison, except only that the latter directly proves suicide, while the former only tends to prove an expectation of death or an intention to commit suicide.

Now the intention to do an act may be as directly, if not as unequivocally, proved by declarations indicating the purpose of the mind as by acts evincing the same thing.

Suicidal insanity is a fact, yet it is proved as well by what the monomaniac says, as what he does. In all cases where a particular state of mind is material to be proved the usual expressions of such feelings made at the time are original evidence, when so proximate to the main fact in controversy, as to be essentially connected with it.

The question, therefore, may be asked, and the answer if proper may go to jury, not as evidence to prove the *fact of suicide*, but as evidence of a *purpose*, which, with circumstances relative to the death and tending to prove a suicide, may render it more or less probable.

The evidence only becomes admissable because of the circumstances which have gone to the jury and may connect Freet with some agency in his own death. If the jury should be unable to find upon the evidence that Freet himself did some act which might connect him with the suicide, then the evidence of intention must be rejected.

This view is supported by what is said in Wills on Circumstan

tial Evidence, 45, though the immediate subject considered was somewhat different. The author says:

"It is not uncommon with persons about to engage in crime to utter menaces, or to make obscure and mysterious allusion, to purposes and intentions of revenge, or to boast to others, whose standard of moral conduct is the same as their own, of what they will do, or to give vent to expressions of revengeful purposes, or of malignant satisfaction at the anticipated occurrence of some serious mischief. Such declarations or allusions are of great moment, when clearly *connected by independent evidence* with some *subsequent criminal action.* The just effect of such language is to show the existence of the *disposition* from which criminal actions proceed, *to render it less improbable*, that a person proved to have used it, would commit the offence charged, and to explain the real motive, and character, of the action. But proof of such language cannot be considered to dispense with the obligation of strict proof of the *criminal facts;* for though malignant feelings may possess the mind and lead to intemperate and criminal expressions, they nevertheless may exercise but a transient influence, without leading to action." (Sec. 3 Bentham's Ind. Ev. bk,, 5 ch. 4.)

It is impracticable to publish *all* the evidence given on the trial, but the following comprises some of the material portions of it:

J. G. Humpshire—Reside in Unionville. Saw Freet the night he died; went in about 9 o'clock in the evening. Freet was lying on his back, with his hands holding on to the bedstead above his head. Old Freet asked me to go for a doctor. I sent Orson Converse for Dr. Converse. The Dr. came after his death. Dr. Cartmell was in when I went in. Old man Freet went after Lothrop Converse, who came in soon after; others also came. His breathing was short and difficult. There was a stove in the room; warm cloths were applied to his head and chest. The shoe-shop of Converse is over the store of Dunnifee, nearly opposite Freet's house. The shop has three windows in the front; the stairway is on the outside on the east of the store. Culver Harper came to me in the evening, and we went to Converse's shop to get him to help us open the coffin containing the corpse of a deceased soldier just brought home. Converse was working at his bench, and as soon as he got done he and Daniel Furgeson came over; it was about candle light when we went over to the shop; I waited at my house till they came over. We went to Harper's together, and remained there from one-half to one hour; then Converse and I returned to Converse's shop to put out the lights and close the doors. We re-

mained at the shop 15 or 20 minutes. On our way across the street Converse remarked that Freet was very sick. When near Freet's, I believe, I asked Converse if he would go into Freet's, and I think Converse said "Freet is jealous of me." He did not go in, but I went in. There was a light in Freet's house at the time. No noise before I went in. Before he died he said "that's what's the matter with the horse." Mrs. Freet, after a short time, threw herself on the couch by her little boy, where she lay until Freet's death. There was noise as I was going in, but not before.

Dr. Jeremiah Converse—Am physician. Acquainted with defendant, and visited the deceased on the 13th of Feb. 1863. He was laboring under premonotory symptoms of pneumonia. Left him six powders of Dover powder and calomel; also a solution of tartarized antimony and powders to be taken every three hours, and liquid between the powders. Did not arrange to return, not supposing he would need more medicine, I left about 3 o'clock; was called back about 11 that night, when I found him dead. The Dover powder was composed of opium, ipicac and sulphate of potash, not poisonous as administered. Solution was not deleterious; have not had any deadly poisons about me. Was present at the post-mortem. There was much swelling around the head and face; we opened the chest, found the lungs sound but gorged with blood in fluid state; stomach was sound, except in the lower part was some inflammation indicating violence; heart and brain examined—all found in a healthy state. The stomach and contents, the heart and serus blood, and the bladder were each placed in separate jars, sealed and delivered to the Coroner. Some time previous to the death of Freet, probably six weeks before, while at Converse's shoe-shop, when I was dealing out for Converse some medicine in powder, a conversation arose between us about poison; cannot state the whole conversation, nor how it arose. Converse casually asked, I think, how much strychnine it would take to kill a man. I took my knife and separated off of the powder about half to one grain, about one-fourth the size of the Dover

powder left with Freet. There was something said about the color; told him it was white; something was said as to which was most speedy in its effects, strychnine or arsenic. On the evening before Freet's death, while at the tea table of Converse, a conversation arose between myself and Converse and his wife about poison; could not tell who commenced the conversation. In reply to the inquiry of some one, perhaps Converse, I told the color of strychnine; some one, perhaps Mrs. Converse, or Mrs. Beard, who was present, said "I told you so." I supposed from the conversation that some previous conversation had taken place between them. Nothing in manner or matter of the conversation at the time which attracted my attention. There was some reference in one of the conversations to the case of Burnham who had some time previous thereto taken strychnine in that vicinity by mistake for opium and died in a few minutes. I put the powders in some newspaper furnished by Mrs. Freet. We generally put up powders in paper furnished at patient's house.

John Qualy: Reside in Columbus, Ohio. In February, 1863, was working for Henry Wilson, in his drug store, on south-west corner of High and Broad streets. Sold a package—a drachm of strychnine, on the 13th of February, 1863, to a stranger. [Recognize Converse as the man. He asked if we sold strychnine to a country physician, in small quantities. I said "No." I told him Mr. Wilson forbid the sale of it except on prescription, or by wholesale. He said I might sell it to a country physician, as he needed it. I finally told him if he would give a dollar, he might have the package, which was marked 65 cents, and in an ounce vial. I waited on three or four customers while he was in. George Groat was in at the time. I next saw him in the court-house the day of the preliminary examination of Converse, after Freet's death, about a week after the sale. I recognized him as the same man. Was porter in the drug store, but sold medicines in packages, and sometimes by prescriptions. Have been a policeman, and am now laboring at the State arsenal as a helper. Admit I refused

to visit the jail where Converse was imprisoned, to pick him out of the crowd; but refused because I knew I could identify him anywhere, and would not act the spy on him. Did not know how many were in jail with him. First saw him after he had been brought into the court-house, and recognized him there. Deny that I gave a description of the person, to whom I sold the poison, to Geo. L. Converse, or to Simon Tompkins, before I had arrived at Marysville, the day of the preliminary examination. Think I did say on the preliminary examination that I did not consider myself good in recognizing countenances. There is a clothing store kept south of drug store—next door.

Peter Bland: Went to Columbus, Ohio, February 13, 1863, on same train Converse went. Walked with him up High Street to within one hundred yards of Broadway, when, in passing some ladies, we separated, he getting in advance of me. He went into the first or second door, I think, after crossing Broadway. The first door is a drug store and the second a clothing store. I went on to Savage's jewelry store, and remained about ten minutes, and when I came out Converse was going on ahead of me, about two rods. He returned home that evening on same train with me, about half-past four.

Uriah Zimmerman: Saw Converse on the evening of the 13th February in the back room over Dunnifee's store. It was about sundown. He was in the north-east corner of the room. He said, "Uriah, have you a cork to fit an ounce vial?" He held something in his left hand with his thumb closed, as if on the mouth of a small vial.

Cross-examined: This room is the one into which the outside door enters from the stairway, and from which he would enter his shop. He had leather there. Dunnifee used the room as a kind of wareroom for boxes, &c.

J. S. Conklin: About two weeks before Freet's death, was in Converse's shop, doing some mending. A conversation arose about poison. Can't tell how it arose. Converse asked what was the difference between strychnine and arsenic. I said there

was a difference, but did not know what it was. Converse wanted to know which would kill anything the quickest. I answered, I thought strychnine would.

Cross-examined: Can't tell who was present, nor how the conversation commenced. Had no other conversation about poison.

Jordan Reams: Went to Columbus with Converse about the 12th of January, 1863. He bought some leather while there. He told me to take the leather and go on, and he would stop a little bit. He went into a drug store, and I followed along after him. He asked for ten cent's worth of arsenic, for a neighbor, who wanted it, he said. He said they wanted it to kill rats. They refused to sell it to him, saying they did not sell it except prescribed by a physician. This was on High Street.

A. F. Wilkins: Can state the testimony of Lieut. A. A. Dockum, which he, while living, gave at the preliminary examination before me:

He said Converse visited his office in Columbus on the 13th of February, 1863, in obedience to a letter requesting his presence there that day. After the business was talked over, a conversation arose in which Converse remarked that Freet was very sick; that Freet had said that he never would go back to the army; and Converse added, that he (Converse) would not be surprised if he (Freet) would kill himself.

On cross-examination, Dockum had, on that occasion, testified that he (Dockum) told Converse of what had happened between himself and Freet at Columbus, the Tuesday previous, viz., that Freet requested Dockum to go and see the Adjutant-General, and ascertain whether Freet was bound by his enlistment and must go back to the army; that when Dockum came back, he took Freet into the back room of his office, and told him that the General decided that he must go back to the army, and Freet turned pale, and his countenance fell." This matter Dockum told Converse before Converse said he would not be surprised if he killed himself.

Converse arrived at my office on High Street just about the time I expected him, and about as soon as he could have arrived from the cars. Would not be positive whether Dockum testified that Converse or Dockum commenced the conversation about Freet, but thinks Dockum said he commenced it.

C. W. Barlow: On the Monday after Freet's death, Converse paid me for his coffin, saying Mrs. Freet gave him the money. That while writing the receipt, heard a conversation between Converse and others, in which Converse said he supposed Freet had killed himself, for he had threatened that he would die before he would go back to the army. He also said the people generally supposed he had killed himself.

Cross-examined: Three of the physicians of Pleasant Valley, where this conversation took place, had been up to the post-mortem examination and inquest, and at least one, if not all, had returned. It was generally known that it had taken place, and was the subject of general conversation.

Adam Woolford: Had charge of the coroner's jury at the inquest as constable. About seven or eight in the evening, I stepped to the door next the street and opened it, and saw a man about eight or ten feet from the door on the street, stepping off as if he had been at the door. I spoke, and it was Converse, and he seemed somewhat agitated when I talked with him. He asked if he might not be in, and, in the conversation, asked whether the jars would have to be sent to Columbus.

Cross-examined: The crowd had been hanging around all day and during the evening. Had been passing back and forth, and perhaps a very few, besides the jury and witnesses, were inside. There was no other person in sight of the door at the time. The blind was over the window, so no one could see in.

Mary E. Freet (one of defendants acquitted on former trial)—Am the widow of Wm. Freet. After the train came on the evening of the 13th of February, 1863, about half-past four o'clock,

Converse came in our house; Freet was lying on the bed in the south-west corner of the front room; the safe stood in the south-east corner; I sat near the front window; the powders were on the safe, about its middle; Converse stood by the safe, about five or six feet from the bed, fronting his face to the bed, at the corner of the safe, and his left elbow on the safe.

While in, he paid Freet a little money he had borrowed in the morning, saying he had not needed it; he talked to F. some ten minutes or more; did not have my eyes on him all the time; did not see him touch the powders; asked F. if the Doctor had been there; he said yes; some talk about the time of taking the powders, and Converse said it will take till six in the morning; there were five to take; said he had been to Columbus.

Cross-examined.—Said he had not used the money he borrowed; the room was small, about twelve feet wide, the door between safe and bed; he went out at front door; I think the conversation about the medicine arose by Freet saying the clock was not running, and he would like to get C.'s watch to take the medicine by. Converse then inquired about how it was to be taken, &c., and hung his watch on the nail about one foot from the front door, on the right as we enter it; the door opens to the left; he said, before leaving, that the watch would need winding, and he did not have his key with him; the door is at the north-east corner of the room. I gave husband the first powder about 3 P. M., in a wafer; the powders were done up in pieces of newspaper—printed paper; no difference in the paper of the three which were given, nor in the *size* or *color* of the powders. The first powder causing some taste, husband fixed the second one himself, I having handed it to him; saw it poured out; about 9 o'clock he took the third; I handed it to him, and he poured it in the wafer on the spoon; fixed it up himself; the tumbler of liquid was about the middle of the safe; I handed the tumbler to him, and he took that himself, in a spoon.

Mrs. Freet—called by Defendant—The Doctor had been there between 2 and 3 o'clock; husband had been out between 11 and 12 o'clock that day; he went up to widow Harper's, to see the

corpse of a deceased soldier who had been brought home; gone ten or fifteen minutes; don't think he was out any more; he came back, and was very much dejected, and cried; I had just completed knitting one sock for him, and requested him to try it on, to which he replied, "No, I shall never need it;" I "might unravel it and knit it for Bunny" (our little boy). On the Sunday previous to his death, in the evening he and I were singing some hymns in our house; he turned a leaf at one of the hymns we sang, and requested that I should have it sung at his funeral. He went to Columbus on the 9th of February, and returned on the 10th; on the 11th, I asked him, as he was going out, for some money; instead of giving me his pocket-book, as had always been his custom before, he took out the money and gave it to me, and kept the pocket-book himself. He had a sick spell about midnight that night.

Cross-examined by State—At the time he requested me to have the hymn sung at his funeral, there was nothing unusual in his manner, and I thought nothing of it at the time.

Saul Bland—A few days before Freet's death, I saw Freet at Unionville; asked him when he was going back to the army; he said he was not going back to the army; he said he had never been paid nor mustered in, and he was not going to go back; I asked how he would help it; he said, "I'll help it; I'll die in my own door-yard before I will go back."

Ormel Pyers—Saw Freet on Thursday previous to his death; were together chopping a load of wood; says I, "William, why did you not report at Columbus the other day?" He said, "Because I did not." "But," says I, "why not?" "I have reported all I am going to; I don't think I will go back to the army alive."

Orson Converse—Heard the conversation about poison in Conklin's presence; when I entered the shop, Conklin was sitting on Bailey's bench, and the crowd was talking about rats; Converse (defendant) said he must work some plan to get rid of the rats, for they were about to eat him out of house and home; some one asked him why he did not trap them; he replied, he had tried, and

failed; some one asked, "Why don't you poison the brutes?" He then asked what would be the best; "strychnine or arsenic;" and asked what was the difference between them, and some one replied, arsenic was best, and most commonly used.

The chemical evidence given in this case, of the presence of strychnine in the body of Wm. Freet, was essentially the same as that given in the case of State of Ohio *v.* Mary Freet, as detailed in Ohio Med. and Surg. Journal, March, 1864, pp. 118—138.

JOHN B. COATS, Prosecuting Attorney, and JOHN D. VAN DEMAN, for the State, made and argued the following points:

Defendant had the *motive* for the murder, the *means*, and the *opportunity*. 3 Greenl. Ev. Sec. 135.

I.—The defendant indulged an improper intimacy with the wife of the deceased, and there was a *motive* to remove the husband.

II.—He bought strychnine for some purpose on the day of Freet's death, and had the *means* to kill. This is proved directly by John Qualey, who sold it, and has no *motive* to falsify. The fact of the sale is *corroborated*.

1. Peter Bland, Wm. Dunifee, J. D. Robinson, all saw him in Columbus on that day, and Bland saw him go in at the first or second door of the corner building where the drug store was located in Columbus, and where Qualey says he sold him the strychnine.

2. This is rendered probable by all the facts, showing the purpose of defendant to kill Freet.

III.—The defendant had a *purpose to kill* Freet.

1. About six weeks before Freet's death, he asked Dr. Jeremiah Converse which was most violent, arsenic or strychnine, and was informed that strychnine was. He then asked the Doctor how much it would take to kill a man, and he was shown the quantity.

2. Again, on the evening of the day of Freet's death, he asked Dr. Converse what was the color of strychnine, to which the Doctor replied it was white.

3. About ten days before the death, he asked J. S. Conklin

which was the most violent, arsenic or strychnine, and which would kill a person or a thing quickest, and was informed that strychnine was the most fatal.

Jordan Reams testifies that on the 12th January, 1863, the defendant, at a drug store in Columbus, asked a druggist to sell him ten cents' worth of arsenic, saying that a neighbor sent for it to kill rats, but he was informed he could not buy unless on the prescription of a physician. Yet no neighbor proves he sent for arsenic. This probably induced him, on the 13th February, to inquire if Qualey would sell to a "country physician," though the defendant was not such, but followed the business of making boots and shoes.

4. He was at Freet's house about 4 P. M. on the day of the death, and leaned on the safe where the Dover's powders were, and had the opportunity to insert strychnine. Again, in the evening, he was at the house for some purpose.

5. Uriah Zimmerman testifies that on the evening of the death, defendant was in the room back of defendant's shoe-shop, which is over Dunifee's store; had his hand closed and his thumb down on it; and as witness went in, defendant asked, "Have you a cork to fit an ounce vial?"

The strychnine was bought that day in a vial.

6. Lester W. Ketch testifies that on the afternoon of February 13, after Converse's return from Columbus, Converse was in his shop, sitting on his "hunkers," with his thumb and forefinger in his left vest pocket, feeling for something in his pocket, and witness heard a sound like rustling of paper. This we claim was the poison.

7. On the day of the death, Lieutenant Dockum saw defendant in Columbus and had a conversation with him about going back to the army. Converse said Freet would not go back, and he "would not be surprised if Freet would kill himself."

IV.—Defendant's conduct indicates guilt.

1. Adam Wolford was at the coroner's inquest held on Freet's body. About 7 P. M. defendant was alone outside of the building,

and moved off when witness went out, but when overtaken asked if the stomach would have to be sent to Columbus.

2. On Monday, after Freet's death, defendant said to C. W. Barton that he supposed Freet killed himself, for he had threatened that he would die on his own door-step before he would go back to the army; and the general impression was that Freet had killed himself.

The fact is, there was no such rumor.

V.—There is no reasonable evidence of suicide.

1. Freet never said he would commit suicide. If he had done so, he would have made the usual preparation for death.

2. His declaration that he would die in his own door-yard before he would go back to the army, only gave evidence of a purpose to resist being taken back when he had never been mustered into the service.

3. The remark he made to his wife that he would never need the socks she was knitting for him, is accounted for by her evidence that he had dyspepsia, was low spirited, and had been unwell; that he was melancholy from having seen the corpse of a soldier that day so changed it could not be recognized.

4. He would not have employed a physician and taken his medicine if he meditated suicide. But he did this; and when seized with convulsions urgently sent for a physician and evinced anxiety to live. If he had knowingly taken poison he would have confessed it.

5. There is no evidence that he had poison or that he took any thing but what was given to him.

6. As a question of law, evidence of declarations are insufficient, unless there be other and satisfactory proof of the *fact of the suicide* and its *means*.

Chauncey N. Olds and *James W. Robinson* for defendant.

The Court, Wm. Lawrence, *Judge*, then read to the Jury the statute defining murder in the first and second degree, and manslaughter, and the indictment, and proceeded to charge substantially as follows:

GENTLEMEN OF THE JURY:—The indictment in this case charges the defendant with murder in the first degree, by administering strychnine poison to Wm. Freet on the 13th day of February, 1863, at Union county.

The defendant pleads—"Not guilty."

You are, therefore, to decide the issue whether he is guilty or not guilty of the crime charged, or of any grade of homicide. The law presumes every man innocent until his guilt is established by proof, and this can only be legally done by evidence which makes it manifest beyond a reasonable doubt.

For this purpose it must exclude or disprove every hypothesis consistent with innocence. If the evidence of guilt consists of a chain of circumstances, and there is a reasonable doubt of any one of them material to a conviction, that one should have no influence in making up your verdict. Sumner *v.* State, 5 Blackf. 579, 3 Greenl. Ev., sec. 29*n*. Every material fact must be proved beyond a reasonable doubt. 5 Cash. 296, 319.

[The Court here stated the rules of law as to reasonable doubts, and the rules of evidence applicable to the case, substantially as in The State *v.* Mary Freet, XVI. Columbus Medical and Surgical Journal, 96–100, May and June Nos., 1864, and in Robbins *v.* State, 8 Ohio State R., 148.]

The Court then proceeded to charge the Jury, as follows:

Having ascertained the rules of law by which you will be guided in considering the evidence, I now direct your attention to other considerations.

In ordinary cases of murder it is well understood that, where the evidence is such as to warrant it, the Jury may find the accused guilty of murder in the first degree, or murder in the second degree, or of manslaughter, or not guilty of any crime.

The 39th section of the Act of March 7th, 1835, "providing for the punishment of crimes," provides that, if the Jury find the prisoner guilty, they "shall ascertain in their verdict whether it be murder in the first or second degree or manslaughter."

In a case of murder by intentional poisoning, with a purpose to

kill, resulting in death from the poison, it may perhaps be very difficult to conceive how the crime could be murder in the second degree, or manslaughter, or any thing less than murder in the first degree.

But by the law as settled in this State it is your duty, if you find the defendant guilty, to ascertain in your verdict whether he be guilty of murder in the first or second degree or manslaughter.

If the evidence shall make a case only of manslaughter, or murder in the second degree, your verdict may be accordingly.

But this power to determine the grade of homicide confers no legal or moral right to disregard the law or your duties under it. It is a power which you are legally bound to exercise in accordance with the rules of law given you by the Court.

You will understand I do not design to indicate any opinion as to whether any crime has been committed by the defendant, or if so, what the grade of the homicide may be, for these are matters within the province of the Jury alone. But, as it would be a misfortune, a wrong, if not a reproach to the administration of justice, that an innocent party should be convicted, so it would be a wrong, giving immunity, if not encouragment, to murder in its most fearful and dreaded form, if the evidence should make a case of murder in the first degree, and, notwithstanding that, the Jury, through misapprehension, mistake, or even from motives of humanity, prompted by a departure from duty, should improperly acquit the defendant, or reduce his crime to murder in the second degree, or manslaughter, unless such be the legal result of the law and the evidence.

To authorize a verdict of guilty of murder in the first degree the material facts to be proved are these :

I.—That William Freet is dead, and that his death occurred before the finding of this indictment.

II.—That the death was caused by poison.

III.—That the poison causing the death was administered to Wm. Freet by the defendant.

IV.—That it was so administered in Union county.

V.—And, finally, that defendant so administered it, knowing it to be a deadly poison. (2 Ohio State R., 75.)

There are other ingredients of the crime, but, in the absence of proof to the contrary, they are presumed from proof of the existence of the particulars already stated, and therefore require no farther or other evidence of them.

They are:

I.—The purpose to kill.

II.—Premeditation as applied to such purpose.

III.—The unlawful administration of the poison.

IV.—In a dose poisonous and deadly in the particular case.

If any one of these are absent, or if on the whole there is a reasonable doubt of the existence of any one of these, there can be no conviction of murder in the first degree.

V.—And, finally, though deliberate and premeditated malice is not made a statutory descriptive element of the crime, yet in fact, "in homicide committed in administering poison, the turpitude of the felonious act is made"—in legal contemplation—"to supply the place of deliberate and premeditated malice," and so it is really an element of the crime. But sufficient proof of it is furnished when the evidence shows an unlawful administration of poison with a purpose to kill, and resulting in death.

If, therefore, the evidence in this case shows that the defendant administered strychnine in a fatal dose to Wm. Freet, knowing it to be such, with a purpose to kill said Freet, and that his death resulted therefrom as charged, the law presumes from these facts a premeditated purpose to kill, which carries with it deliberate and premeditated malice, and the crime is murder in the first degree; in such case it can be no less.

If it should be proved that the defendant administered strychnine to Wm. Freet, knowing it to be such, and that death has resulted therefrom, a presumption arises, in the absence of any other

proof, that the defendant intended to kill.—Farrer *v.* State, 2 Ohio St. R. 75.

Murder in the first degree is simply homicide effected by unlawfully administering poison, knowing it to be such, with a premeditated purpose to kill, which necessarily carries with it deliberate and premeditated malice.

If upon the evidence you find the defendant guilty of murder in the first degree, you need not extend your inquiries further, but return a verdict accordingly.

If, however, you do not find him thus guilty, you will proceed to inquire, is he guilty of murder in the second degree?

Murder in the second degree is an intentional malicious killing, but without deliberation and premeditation.

The only difference between murder in the first and second degree, by *poisoning*, therefore, consists in this: that in the first degree, a premeditated purpose to kill is essential, and there is necessarily deliberate and premeditated malice implied from the unlawful administration of poison with each intent; while in the second degree, the purpose to kill is requisite, but not a *premeditated* purpose, and *malice* simply, is, by the statute, made essential, but not *deliberate* and *premeditated* malice.

If, therefore, every fact exists necessary to constitute murder in the first degree, except only that the *premeditation*, as applied to the purpose to kill, is disapproved, or if there is a reasonable doubt of its existence, then you can find the defendant guilty only of murder in the second degree. And in murder in the second degree, there is *malice*, but not *deliberate* or *premeditated* malice.

But in law,

"A killing purposely by means of administering poison, does within and of itself import and include deliberate and premeditated malice."—8 Ohio St. R. 185.

I will say to you, therefore, as *Waite* I. said, in State *v.* Dowd, 19 Conn. R. 391:

—"If any case can be supposed where murder may be committed by means of poison, and not be the result of such an act [deliberate and premeditated malice], then a conviction of murder in the second degree may be legal."*

But, you will bear in mind, a premeditated purpose to kill, is *conclusive* evidence of premeditated malice.

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* In the case of State *v.* Mary Freet, XVI. Vol. Columbus Medical and Surg. Jour., May, 1864, page 190, I have given my reasons for believing there can be no such thing in Ohio as murder in the second degree by poisoning. If there can, the reason must be, because *deliberation* and *premeditation*, as applied to *malice*, is necessary, but *may* not exist, or because *premeditation*, as applied to the *purpose to kill*, is necessary, but *may* not exist.

Now, *malice* is not by the *statute* made an element of the crime of murder in the first degree by poisoning, but it is in *fact* an inseparable attribute of every unlawful administration of poison with intent to kill or even injure.

In Robbins *v.* State, 8 Ohio St. R. 187, the court properly held, as the statute clearly imports, that "*malice* is not *made* essential in order to constitute the crime" of murder in the first degree by poisoning, though a *purpose to kill* is. With the exception therefore, that a *purpose to kill* is a part of the crime, it is in all other respects made to depend exclusively upon the MEANS causing the death—upon the *fact of poisoning.*

Now where that is the case, murder by poisoning cannot be reduced to murder in the second degree, by showing the absence of *deliberation* and *premeditation*, as applied to *malice*, because—

1. *Malice* itself, as we have seen, is not necessary; and,

2. So far as it is an inseparable element, the law *conclusively* presumes *deliberation* and *premeditation* as accompaniaments.

The statute of Tennessee enacts—

"That all murder that shall be perpetrated by means of poison, lying in wait, or any other kind of willful, deliberate, malicious and premeditated killing, or which shall be committed in the perpetration of, or attempt to perpetrate any arson, rape, robbery, burglary or larceny, shall be deemed murder in the first degree, and all other kinds of murder in the second degree."

Murder by poisoning is the same under the Ohio Statute, except that, under the latter, *a purpose to kill* is requisite—the difference not being material to the present inquiry.

The Supreme Court of Tennessee, in construing the statute of that State, in 4 Hump. R. 136, cited in Warton on Homicide, 365, say:

"In cases of murder, by means of poison, or lying in wait, the most detestable of all kinds of homicide, and the least to be guarded against, either by resistance or forethought, the crime is made to depend exclusively upon the '*means*' causing death. So, likewise, in respect to cases of murder committed in the perpetration of, or attempt to perpetrate arson, rape, robbery, burglary, or larceny; a class of felonies most dangerous in their consequences to public safety and happiness, which may be most frequently and easily committed, and to which there is the strongest temptation. In all these cases the mode or

If, therefore, you find from the evidence that there was not deliberate and premeditated malice, or that there is a reasonable doubt whether the defendant administered the poison with such malice, the crime can only be murder in the second degree, even though there was a *purpose to kill*, if it was not a *premeditated* purpose.

If the defendant unlawfully administered poison to Wm. Freet, of which he died, knowing it to be such, in a deadly dose, the law presumes therefrom the premeditated purpose to kill, and from these the legal inference of deliberate and premeditated malice arises, and this should not be overlooked by the jury.

From this it will be seen that in murder in the second degree, by poisoning, the essential facts are these:

I. The death of Wm. Freet before this indictment was found.

II. That he died of poison.

III. Administered by defendant.

IV. In the county.

V. Knowing it to be a deadly poison.

These must be proved by circumstances or otherwise beyond a reasonable doubt.

'*means*' of destroying life supplies a CONCLUSIVE legal presumption of malice and guilty intention; the crime as well as guilt of the agent, is made to depend alone upon the *fact of taking life* in either of the *specified modes*. In such cases the question of malice or intention, as a matter of fact, is wholly irrelevant; it need not be proved, and *cannot be controverted* by the accused. But the remaining species of murder defined in the statute, namely, murder 'by any other kind of willful, deliberate, malicious and premeditated killing,' falls within the operation of a directly contrary principle. Here the character of the crime and guilt of the agent are made to depend exclusively upon the *mental status* at the time of the act, and with reference to the act which produces death." And see Robbins *v.* State, 8 Ohio St. R. 196; per Swan J.; 2 Hale, 455.

Nor can murder by poisoning be reduced to murder in the second degree by showing the absence of *premeditation*, as applied to the *purpose to kill*; for the murder statute does not require a *premeditated purpose* to kill, but only a *purpose*. Its language is, "that if any person shall *purposely*," &c.

I prepared the charge to the jury above to conform to what I understand to be the effect of what is said by *Bartley* C. J., in Robbins *v.* State, 8 Ohio St. R. 181.

There are other elements of the crime, as—

I. The purpose to kill without deliberation or premeditation.

II. Malice accompanying the purpose and its execution not accompanied with the qualities of *deliberation* and *premeditation*, if that be possible.

But as a premeditated purpose to kill and deliberate and premeditated malice are presumed from the fact of killing by a fatal dose of poison, knowing it to be such, it is the sworn duty of the jury to find the defendant guilty of murder in the first degree, if the necessary facts are proved, unless on the whole evidence such *deliberation* or *premeditation* is disproved, or there is a reasonable doubt of the existence of such deliberation or premeditation.

If you find the defendant not guilty of murder in the first degree, but guilty of murder in the second degree, your inquiries need not proceed further. But if you do not find him guilty of murder in the first or second degree, you will proceed to inquire—Is he guilty of manslaughter?

If the defendant unlawfully but intentionally administered to Wm. Freet, at Union county, strychnine poison of which he died, by means of a poisonous dose and thereby caused his death, but without any intention to kill whether with or without malice, whether the defendant knew its deadly character or not from any evil unlawful motive, then he is guilty of manslaughter—no more, no less.

The evidence might show a poison to be administered to cause sickness, or pain, or in wicked mischief, without any intention to kill, and if in such case death ensued the crime would be manslaughter only.

But it should be remembered that where poison is unlawfully given, knowing it to be such, in a fatal dose resulting in death, the law presumes that there is a purpose to kill unless the circumstances create a reasonable doubt of such purpose.

[The Court explained the several points thus stated somewhat in detail, and then proceeded as follows.]

In your inquiries you will ascertain if the defendant had the *motive*, the *means*, and the *opportunity* to kill.

It is affirmed by the State and denied by the defense, that the accused indulged an improper intimacy with the wife of deceased, and had a *motive* to remove the husband whose presence prevented the consummation or indulgence of his purposes. How this is, is submitted to you on the evidence.

It is affirmed by the State and denied by the defense, that the defendant purchased strychnine in a drug store in Columbus on the day of Freet's death, and therefore had the *means* of effecting death. How this is, is submitted to you on the evidence.

In this connection the evidence of *Qualey*, who is alleged to have sold the strychnine, should be carefully scrutinized.

For the defense it is urged that he is unworthy of credence, because his reputation for truth is shown to be bad, and because he has, on more than one occasion, described the purchaser of the poison differently from the description given by him as a witness and variant from the truth.

For the State it is urged that he had no *motive* to falsify; that the evidence of bad reputation is rebutted, that witnesses who testify as to contradictory statements are mistaken, or misunderstood them. 1 Greenl. Ev. sec. 200.

And finally it is urged that *Qualey* is *corroborated* by evidence that defendant was at Columbus on the day of the death, that he was seen to go into a door of or in the vicinity of the drug store where the poison is alleged to have been sold, and is in other respects sustained. How all this is, and what is or is not proved, is submitted to you on the evidence.

The presumption of law is that every man testifies honestly and is worthy of belief, and this presumption is to be acted on until by legal and satisfactory evidence or by something apparent in the conduct or demeanor of the witness, it is made to appear that there is a reasonable doubt of the credibility, truthfulness or accuracy of the witness.

It is affirmed by the State and denied by the defence that the accused had the *opportunity* of administering the poison, either through the guilty agency and participation of the wife of deceased, or by depositing the poison himself in medicine prepared for deceased, or otherwise, and that for that purpose he made a visit or visits to the house of deceased on the afternoon and evening of the death.

How all this is, is submitted to you on the evidence.

It is affirmed by the State and denied by the defence that the accused has given evidence of a guilty purpose, and of guilt, by an effort to purchase arsenic prior to the alleged death of Freet; by repeated inquiries as to the color, and quantity of strychnine necessary to kill; by the prediction that Freet would kill himself; and the opinion, subsequently expressed, that he had done so, and by the inquiry, after the death, if it would be necessary to send the stomach of deceased to Columbus.

Whether this is so, and if so, what may be the effect thereof, is submitted to you.

As a question of law, however, you will bear in mind that declarations indicating a purpose are received to show the existence of the disposition from which criminal actions proceed, to render it less improbable that the accused would commit the offence charged, and to explain the motive and character of the action. But proof of such language cannot dispense with the necessity of sufficient proof of the criminal fact of the administration of poison in a fatal dose, knowing it to be such, resulting in death.

It is a part of the defence that Wm. Freet committed suicide; that such purpose was indicated by his declaration that he would die in his own door-yard before he would go back to the army; that on the day of his death he said to his wife to ravel out a sock she was knitting for him, that he would never need it; that he then shed tears, having just returned from seeing the corpse of a soldier of his acquaintance so changed as to be difficult of recogni-

tion; that on the Sabbath evening previous to his death he sang a hymn with his wife, turned down a leaf where it was found in the book, and expressed a desire that it should be sung on the occasion of his funeral when he died; that on the same evening, about midnight, he had a spasm, or something like it, somewhat similar to those of which he died.

For the State it is urged that Wm. Freet had dyspepsia, and, being unwell, might fear or anticipate death, but never declared a purpose to commit suicide; that he had neither the poison nor the purpose to do so, and that his remark as to his return to the army only evinced a determined purpose not to go back.

What may be the evidence, or what is proved by it on this subject, is submitted to you to determine.

There is no presumption that death is the result of suicide; but if the evidence is such as to raise a reasonable doubt whether the death was occasioned by the act of the defendant, then he cannot be convicted.

But it must be observed that the mere declarations of the deceased are offered to show the existence of the *disposition*, and to render it less improbable that Freet would commit the suicide.

But proof of such language is not evidence of the suicide unless there be some other fact, or act, or circumstance, to show the commission of it. It is for you to say if there be such fact, or act, or circumstance, and if so, whether, all considered together, are sufficient to establish it or raise a reasonable doubt upon the whole evidence of the death, in manner and form, as charged in the indictment.

The defendant has offered evidence, not as to his character generally, but to show that he has always been peaceably disposed, having no inclination to do any act endangering life.

Gandolfo *v.* The State, 11 Ohio State R., 117.

So far as this may render it more or less improbable that the accused would be guilty of the crime charged, you will give him the full benefit of it in your deliberations.

Where a case "hangs in even balance, good character should make it preponderate in favor of a defendant. But if the evidence of guilt be complete and convincing, then testimony of good character cannot and ought not to avail." Wills on Circumstantial Evidence, 131.

I have not attempted to trace all the features of the evidence or argument, but all are submitted to you.

[The Court then gave the usual instructions as to the form of the verdict.]

The Jury retired, and in about three hours returned with a verdict of NOT GUILTY.

SURGEON-GENERAL'S OFFICE,
Columbus, O., April 15th, 1864.

Prof. John Dawson, M.D., Editor Ohio Med. and Surg. Jour.:

DEAR DOCTOR,—I have just received from Surgeon H. Z. Gill, U. S. Volunteers, the inclosed special report of seven cases of amputations of the thigh, with the result in each case.

The report is valuable because of the final results, so often impracticable to obtain in such reports of field operations.

I have also the promise of Dr. Gill of a detailed report of all the capital operations in his division, with their final results, covering the period of one year. When received, I will, if desirable, gladly furnish you a copy for publication.

Very respectfully,
R. N. BARR,
Surgeon-General of Ohio

Seven Cases of Amputation of the Thigh, performed within thirty hours after the injury. By H. Z. GILL, Surg. U. S. Vols.

I. Sergt. Geo. Keyser, Co. "G," 95th Regt. O. V. I.; wounded Aug. 30, 1862, at the battle of Richmond, Ky. The right femur was comminuted in the upper third by a Minie ball. The injury

occurred about 4 o'clock P. M. The amputation was performed at 9 o'clock P.M. next day—thirty hours after injury. Chloroform was administered. The circular incision was made through the soft parts; the bone was divided at the trochanter minor. The hemorrhage was completely arrested before dressing; the amputation in case No. 2 being performed before this case was dressed. The case did well until the middle of October, at which time he had typhoid fever, from the effects of which the wound partially opened, and he became very much reduced. He recovered, however, and is now County Treasurer of Champaign county, Ohio.

II. Geo. Wilson, Private of Co. "I," 95th O. V. I., was wounded at the same time in the same battle. The left femur was comminuted by Minie ball. Chloroform was administered. The amputation, by circular incision, was performed in the middle third, about thirty hours after the injury. The case recovered without an unfavorable symptom, and he was, a short time since, living at his home in Reynoldsburg, Ohio.

So much was I impressed with the necessity of performing the operation at as early an hour as possible, though I had no instruments with me of my own, and the surgeons who had remained with the wounded were very weary, yet I told them, with their assistance, the cases must be attended to that night. So far as I can now remember, every case of amputation performed after that night, wounded at that battle, died.

III. Wm. Birt, Corp., Co. "D," 47th Regt. Ill. Vol. Infy., was wounded at the siege of Vicksburg, Miss., May 22, 1863. A cannon ball had fractured the femur and lacerated the lower and middle thirds of the left thigh. The shock of injury was very decided. Amputation was performed at 9 o'clock P. M., five hours after the injury. Chloroform was given. The circular operation was made, both of necessity and of preference. The bone was sawn two inches below the trochanter minor. Stimulants were

administered as soon as the section of the bone was made. Hemorrhage was completely arrested before dressing the stump.

There was an additional wound on the same side, about an inch posterior to the trochanter major, into which the finger could be inserted its full length, and from which a portion of the guard of his gun was removed three months afterwards. The case progressed very favorably, except the latter wound. The amputation was entirely united by the 4th of July, at which time I left him. He died at home in October, of chronic diarrhœa.

IV. Columbus Reed, Private, Co. "F," 4th Regt. Va. Vols. (Federal), was wounded at the siege of Vicksburg, Miss., May 19, 1863, by a Minie ball, fracturing the left femur, involving the knee-joint.

Amputation next day, eighteen hours after injury, by circular operation in the lower portion of the middle third. Chloroform was administered. He was sent home about the middle of June, well.

V. James M. Rhea, Private, Co. "I," 8th Regt. Iowa Vol. Infty., was wounded at Vicksburg, Miss., June 22, 1863, by a Minie ball entering the right knee-joint, fracturiug the patella, also the spinous process of the tibia. The ball was found in the crucial ligament of the joint. The femur was uninjured. I proposed resection, but was not supported by the other surgeons. Chloroform was administered; operation was performed four hours after the injury. The circular cut was made, except the anterior portion of the integument and facia, which were cut semi-circularly after Skey's method. The hemorrhage from the femoral vein was very obstinate. The patient was in bad health at the time of the injury. A clot formed in the wound, which we supposed arose from hemorrhage from the femoral vein. The wound was doing well on the 8th of July, but on account of the movement of troops to Jackson, Miss., and the death of the surgeon in charge of the hospital, the case was in measure neglected. An abscess

formed on the sacrum, and the patient died July 25th, thirty-three days after the operation, the wound at the time being nearly closed.

VI. John Wedeking, Private, Co. "A," 114th Ill. Vol. Infty., wounded near Jackson, Miss., July 16, 1863, by a Minie ball entering the right thigh from the external aspect, fracturing the femur, and rupturing the femoral vein. The ball entered a short distance below the trochanter major, and was divided by the bone, both pieces passing through as far as the integument of the inner surface of the thigh—one piece severely contusing the corresponding testicle. Chloroform was administered. Amputation performed five hours after injury. Semi-circular integumentary flaps were made, and circular cut of the muscle. The bone was divided half an inch below the trochanter minor, though a portion of the bone was split off higher up. The wound of entrance was above the external angle of the flaps. The wound was dressed an hour after the operation. It united almost entirely by first intention. The case recovered rapidly. He sent me his photograph, taken at St. Louis, February, 1864.

VII. Williston Utter, Private, Co. "K," 8th Regt. Iowa Vol. Infty, was wounded near Jackson, Miss., July 19, 1863, by a Minie ball entering the right knee-joint from the anterior aspect, fracturing the patella and the head of the tibia, and passing out three inches below, near the spine of the tibia. Chloroform was administered. Amputation was performed in the lower third of the thigh, twenty-eight hours after the injury. Semi-circular integumentary flaps were made, with circular cut of the muscles. The man was a clerk in a store in Iowa, in March, 1864.

The last two men were carried on litters forty or fifty miles, starting on July 21, 1863, on account of the army falling back from Jackson to Black River.

TABULAR STATEMENT OF AMPUTATIONS OF THIGH..

No.	Name.	Rank.	Company.	Regt.	Injury.	Missile.	Hours after injury.	Remarks.
1	Geo. Keyser ..	Sergt.	G	95 O.V.I.	Frac. femur	Minie ball .	30	Recover'd
2	Geo. Wilson...	Private	I	95 O.V.I.	Frac. femur	Minie ball .	30	Recover'd
3	Columbus Reed	Private	F	4 Va. V.	Frac. femur	Minie ball .	18	Recover'd
4	Wm. Birt	Corpl.	D	47 Ill. ..	Frac. femur	Cannon ball	5	Recover'd
5	James M. Rhea	Private	I	8 Iowa ..	Frac. knee	Minie ball .	4	Died*
6	John Wedeking	Private	A	114 Ill...	Frac. femur	Minie ball .	5	Recover'd
7	Williston Utter	Private	K	8 Iowa...	Frac. knee	Minie ball .	28	Recover'd

* Thirty-three days after the operation.

Glanders.

MADISON GENERAL HOSPITAL,
MADISON, IND., June 10, 1864.

Equinia—more commonly termed glanders—although a disease of very rare occurrence, is so obstinate in resisting all medical treatment, and consequently so universally fatal, that the history of each case becomes valuable to science, and its treatment a subject worthy the most careful consideration of every practitioner.

Although Hippocrates, the Father of Medicine, in his works very accurately and completely described the symptoms of glanders in the horse, yet it was not till within a very modern date that it was known to extend beyond the horse, the ass, and the mule. Cases have occurred where it has unquestionably been communicated to *man* in both the acute and chronic form. The affection thus communicated from the horse to man has, by Dr. Ellotson, been very appropriately termed Equinia.

A very small minority of medical writers treat of this malady; and its pathology seems to be surrounded by a degree of obscurity that indicates too little investigation in so fatal a scourge. But it is not my intention to write an essay on this disease; but, in com-

pliance with the request of some of my colleagues here, to report a case of glanders that occurred in this hospital.

Thomas Duren, a private in Co. H, 33d Reg. Mass. Vols., came under my care on the 10th of May last, with the following symptoms and history: Fever; headache; skin hot and dry; respiration hurried; sore throat; pulse very frequent, soft, and weak; tongue furred; submaxillary glands swollen; stomach very irritable; pain in limbs and joints; no appetite. He had, before I saw him, been confined to his bed for some time under treatment with unsettled diagnosis—one physician terming his disease bilious fever, and another gastritis. A day or two before coming under my care, a small pimple made its appearance on his chin, which in a few days, from its phagedenic and gangrenous character, attracted some attention. I removed the incipient sloughs, and penciled it with nitrate of silver. My next visit found the sloughing uninterrupted, and rather on the increase. The same process of removing sloughs by penciling was continued a day or two, but without any remedial or beneficial effect. On the third morning from the first application of the caustic, I found, upon syringing and cleansing the sore, that it had almost denuded the inferior maxillary at the symphisis mentis, and burrowed laterally in the soft tissues to considerable extent—its surface being as large as a silver dollar. Pure nitric acid was now applied, which, on a second application, checked the sloughing and phagedenic process, and in a few days a sort of semi-healthy granulation set up; but gangrenous spots now began to appear on the arms and legs, to which the nitric acid was successfully applied. As before remarked, the throat was very sore, rendering the voice coarse and husky. The tumefaction, which had previously been mostly confined to the submaxillary glands, now began to extend to the cheeks, temples and forehead, till vision was entirely destroyed. The nostrils, from which had issued a profuse, thin, straw-colored flow, now gave out a dark, sanious discharge of the most fœtid odor. A mucus of the most

disagreeable character was discharged from the eyes and mouth, excoriating the skin on the face, causing the countenance to present a very unseemly appearance. The teeth and gums were covered with a profuse sordes, while the exhalations from the body rendered the air in his immediate presence loathesome.

Not being satisfied with the character of the disease, I invited the surgeon in charge of the division—an extensive practitioner of some twenty years' standing—to visit the patient with me. He immediately pronounced it a case of glanders, and proceeded to interrogate the patient as to his former history, and learned from him that he had formerly been a farmer, and had on two occasions administered to horses affected with glanders. And although these were the only occasions he recollected of having been exposed to the contagion of the disease—and these were months before his present illness—it was concluded that he had at that time received the virus into his system, which after an indefinite incubation, had resulted in the present manifest symptoms of glanders. He spoke frequently of his family, and conversed rationally on different subjects till about two days before his death. In addition to symptoms already mentioned, he had some cough, slight at first, but afterwards somewhat annoying. His expectorations were dark, sanious, and very tenacious, resembling in appearance small pieces of liver, and of a very offensive odor. His bowels were at first somewhat constipated, but toward the close of his illness very loose—the discharges thin, and of a dark color and offensive smell. In addition to the local treatment already mentioned, some astringent lotions were applied to his head and face, in hopes of reducing the swelling. The general treatment consisted of tonics, stimulants, diuretics, opiates, and astringents, combined with a good nourishing diet. In the minds of some of the younger physicians here, some doubt existed as to whether this was a case of glanders, and that doubt originated, not in a want of proper symptoms, but from the fact that the patient had not been exposed to the disease for a

period far beyond the limits of the incubation of that malady, as taught by all writers on glanders. Admitting there is a discrepancy between the teachings of authors and the assumption in this case concerning the stage of incubation, we ask why may not the stage of incubation of glanders, like that of hydrophobia and other similar affections, have an indefinite range—embracing weeks, months, and sometimes even years?

There is a multitude of influences that counteract the encroachments of disease, and these influences are possessed in various degrees by different individuals. Some have strong vital powers that act as a barrier to the insidious, noxious virus of many contagious maladies, enabling them to mingle amid influences unharmed that would speedily prostrate less vigorous individuals, while others possess idiosyncrasies that cause them to be the speedy and fatal recipients of the slightest infections or morbid effluvia; and without further elaboration, we ask, is it not reasonable to infer that the incubative stage of even Equinia may be somewhat influenced by the condition of the patient, his powers of endurance, or his idiosyncrasies? In the case of Duren, there are two significant facts, one derived from the patient himself, and the other came under my own observation, viz: 1st. The patient had, on two occasions, acted as groom to glandered horses; and 2d. In an indefinite period afterwards, died with all the symptoms of glanders.

JOHN S. GARD,
A. A. Surg. U. S. A.

Toxicology.*

Report of Experts in a Trial for Supposed Criminal Poisoning with Digitaline. Translated from the Jour. Chem. Med. June, 1864. Paris. By ROBT. M. DENIG, M.D., Columbus, Ohio.

The undersigned, Ambroise Tardieu, Professor of Medical Jurisprudence, &c., in order to proceed to the autopsy of the body of the deceased widow de Pauw, interred in the Cemetery of Mont Parnasse, on the 19th of November, and to explain the cause of her death, repaired on the 30th to the above-mentioned cemetery. The exhumation having been made and the body identified, we proceeded to the post-mortem examination intrusted to us. The state of preservation of the body was such, that not only externally but internally the least lesions were perfectly appreciable. The body was that of a woman about 40 years of age, whose corpulence and general aspect indicated that she had not been exhausted by long suffering incident to chronic disease. There existed no trace of violence exteriorly; the most careful examination did not reveal, either upon the trunk or members, either anteriorly or posteriorly, any mark of cruelty, injury or contusion. The integument and bones of the cranium were intact; the brain in a perfectly normal condition; the interior of the mouth and fauces offered nothing worthy of note. The lungs were perfectly healthy; we discovered neither congestion, apoplexy, inflammatory alteration or tubercular deposition. The heart, equally intact, inclosed a considerable quantity of half coagulated blood. After having removed the clotted blood, we satisfied ourselves that all parts of this organ, and especially the valves and orifices, were in a perfectly normal condition.

Upon opening the abdomen, we did not find any effusion of blood, serum, or any other fluid, in the cavity; the different abdominal viscera, the liver, the spleen, the kidneys, were healthy.

As to the digestive tube, the stomach and intestines, it presented only, in places, slight sanguineous stains, and some injected spots were scattered throughout the entire course of the canal; but no part of the mucous membrane was the seat of inflammation either acute or chronic; in no part of it was there either softening, ulceration, or perforation.

The genital organs, as well internally as externally, present no

* The trial of Couty de La Pommerais having attracted the attention of all our Medical Jurists as well as Toxicologists, we have thought proper to reproduce, *in extenso*, the judicial reports made in the case by MM. Tardieu and Roussin. A. CHEVILLIER.

trace of disease or violence; but we discovered the womb to be in the early stage of a gravid condition. The product of conception, in every way intact, had a development of about seven or eight weeks.

In summing up our conclusions resulting from the examination, we affirm that—

1st. There existed in the widow de Pauw, no trace of appreciable lesion, either long standing or recent, which can, after a most careful examination of the organs, render a natural account of her death.

2. This absence of characteristic lesions and positive indications, especially in the digestive tube, naturally suggests the suspicion that her death has been the result of the ingestion of some poisonous substance.

3d. The analysis of the viscera can alone in this respect furnish positive results. We have, consequently, extracted from the body and placed them in two new glass jars—in the one the stomach and intestines; in the other the liver, the kidneys, heart and lungs. These jars have been carefully closed and sealed, and our signature placed upon the label.

(Signed) A. TARDIEU.

Paris, 29th December, 1863.

REPORT OF EXPERTS.

We, the undersigned, A. Tardieu and Roussin, Professors of Toxicology, &c., have been deputed by M. de Gonet to ascertain if there exist still in the organs of the widow de Pauw, and upon the floor of the room in which she died, traces of any poisonous substance.

All the operations, experiments and analyses to which we have found it necessary to resort in order to accomplish our mandate, have taken place in the Military Hospital of Val-de-Grace.

These operations terminated, we make the following report, which sets forth and sums up the details of our numerous researches, as well as the conclusions which seem legitimately to flow from them.

LIST OF SEALED PACKAGES RECEIVED FROM THE HANDS OF THE JUDGE OF INSTRUCTION, BY A. TARDIEU AND ROUSSIN.

A. *Substances seized at the house of the accused.*

1st. A small wooden box, closed with hasps, marked No. 7. 2d. A small box, marked No. 8. 3d. A large white box, marked No. 6. 4th. A large square wooden box, marked No. 10. 5th. A copper box, closed with hasps, marked No. 1. Also a large square pasteboard box.

[These boxes, &c., contained the complete *armamentaria* of a homeopathic doctor, numbering some 900 different articles.]

B. *Organs of Madam de Pauw.*

These packages consisted of two large sealed glass jars, containing the organs extracted from the body of the widow de Pauw.

C. *Package containing articles derived from the chamber of the widow de Pauw.*

1st. Twenty-three boards of the floor. 2d. Concretions scraped from the surface of the floor. 3d. Fragment of linen found upon the window in her room. 4. Matters scraped from the floor under the bed of the deceased widow.

D. Finally we received, from the Judge of Instruction, information concerning all the different parts of the transaction, necessary to illumine some points of the questions which have been transmitted to us; especially the correspondence of the widow herself—the depositions of scientific men and others, who, having been in close relation with her, have been able to furnish valuable information in regard to her habitual health—and especially upon her condition immediately preceding her death.

Upon the reception of these various articles, we proceeded at once to the inspection of the seals and labels placed upon them; and affirm that the integrity of each and all was such as left nothing to desire.

In making our report we will follow the order which has just been indicated.

In the first place we will apply ourselves to making out a catalogue of the different articles taken possession of at the house of the accused.

In the second, we will set forth the process of analyzing the organs extracted form the widow de Pauw, and the results which these analyses have furnished us.

In the third, we will combine the analyses and researches of matters collected upon the floor, and upon the linen found in the chamber.

The fourth we will devote to the exposition of the physiological experiments undertaken by us upon living animals, in order to establish the presence of poisonous substances, of which chemical analysis is not able sufficiently to determine the nature.

In the fifth place, we will compare with the preceding facts, the *testimonies* and *proofs collected* in our *instructions*, as well with regard to the former health of the widow de Pauw, as the symptoms which immediately preceded her death; and the state of the organs revealed by the autopsy of the body.

Finally, the sixth part will contain the conclusions which result from the entire assemblage of facts, and the response we have been able to make to questions touching the cause of the death of the widow de Pauw.

I. Examination of the different Substances seized at the House of M. Couty de La Pommerais.

[These substances, consisting of some 900 different compounds and homeopathic preparations, were all carefully determined by accurate chemical analysis, numbered and labeled. We omit the detail, given at length, of them, in the report—noticing only a few articles which, having been italicised, seem to have direct bearing upon the case.]

27. Hydrochlorate of Morphine, 4 *grammes.*

This dose, of a *substance so dangerous, is very considerable, when we reflect that it can be administered with safety only in doses of a very few centigrammes.*

29. Digitaline.

This vial contained at first 2 *grammes; there remained, at the moment of the inventory, only* 15 *centigrammes; that is to say, the one-thirteenth part. Now, Digitaline is a substance of such extremely active properties, that it can be administered, with safety, only in doses of a very few milligrammes.*

The invoice bills of the house of Menier, which have been exhibited to us, reveal, in regard to this substance, the following facts:

1. *At the date of October* 4, 1861, *the accused bought* 50 *centigrammes of Digitaline,*

2. *On the* 11*th of June,* 1863, *the accused bought* 1 *gramme.*

3. *On the* 19*th of June the accused bought* 2 *grammes.*

Total, 3 *grammes and* 50 *centigrammes of Digitaline,* of which there remain at present only 15 *centigrammes*—that is to say, about the *one twentieth.*

A consumption so considerable appears *out of all proportion, not only with the requirements of a physician, but even in a pharmaceutist would indicate a very large custom.*

Digitaline is one of the most violent poisons known. It is possible to administer it only in doses of from 1 to a few milligrammes (now, one gramme contains 1,000 milligrammes). In the dose of from 1 to a few centigrammes, it is infallibly fatal.

Twelve grammes of Hydrochlorate of Morphia have been bought by the accused at the following dates:

1st. *Four grammes on the* 4*th of April,* 1861.

2d. *Four grammes on the* 23*d of February,* 1863.

3d. *Four grammes on the* 26*th of November,* 1863.

We could prolong this list indefinitely, and enumerate in it hundreds of substances or preparations, very dangerous, and as active as those we have already enumerated. We have restricted ourselves to the preceding, supposing they would give a sufficient idea of the medicinal substances employed by the accused, and his tendency to have in his possession a numerous collection of poisons, whilst he is surrounded by homeopathic pharmacuetists, who alone are authorized to prepare and deliver these dangerous compounds.

I. EXAMINATION OF THE ORGANS EXTRACTED FROM THE DEAD BODY OF THE WIDOW DE PAUW.

These organs were contained in two large glass jars with wide mouths, perfectly corked and sealed. The one bottle contained the stomach and intestines, and bore the following label:

"District of Mentparnasse Department of Health. Verbal process of Nov., 1863.

"Jar No. 1, containing the stomach and the intestines extracted by M. Tardieu, from the body of the defunct Francoise Julie Testu, widow de Pauw."

The other jar enclosed the other organs of the deceased, and bore the following label:

"District of Mentparnasse, &c., &c."

"Jar No. 2, containing the liver, the lungs, the heart, and the kidneys, extracted by M. Tardieu, from the body of the defunct Francoise Julia Testu, the widow de Pauw."

On opening the jars we found a most remarkable state of preservation of these different organs. In particular, the jar containing the stomach and intestines, is almost free from odor, and presents no vestage of putrefaction. That which contained the other organs gave evidence of the commencement of manifest disorganization. The organs were tumified, and distended with gaseous exhalations, so as to be kept with difficulty within the jar.

We hastened, in consequence, to empty into a large porcelain capsule, well adapted for the occasion, the contents of jar No. 2; and after making several incissions in different parts of the tumified mass, to give exit to the gas, we covered this pulp with alcohol of 90° very pure, with the view of arresting the fermentation already commenced, and to prevent any further decomposition.

We proceeded immediately to our toxicological researches. To this end we divided in two portions, as nearly as possible equal, the different organs contained in jar No 2.

One of these portions was held in reserve for any unforseen accident, the other was at once put under examination.

That portion destined for immediate analysis was cut into small thin slices by means of a new scalpel, and introduced into a retort with 200 grammes pure concentrated sulphuric acid. This retort, provided with an extension and a balloon shaped receiver, properly cooled, was heated in a sand bath until all disengagement of vapor had entirely ceased.

There remained in the retort only a charred mass, dry and friable; and we find in the receiver about eight centigrammes of liquid, very acid, emitting a lively odor of sulphuric acid.

The examination of the charred mass was made in the following manner: Extracted from the receiver by means of a glass rod, it was carefully reduced to powder, and re-introduced into a new receiver, with 50 grammes pure concentrated nitric acid.

After a prolonged digestion in a salt-bath, we added 250 cubic

centimetres of distilled water, then place it upon a filtre; the filtre is washed by repeated applications of distilled water until entirely freed from all soluble matter; we obtain in this manner 600 cubic centimetres of a watery fluid, strongly acid, which we evaporated, also in a salt-bath, almost to dryness.

In this state this solution presents the following characteristics: the addition of hydro-sulphuric acid, even to a persistent odor, gives rise to only slight deposit of a whitish yellow sulphuret, completely insoluble in water and ammonia. Ammonia and potash produce an abundant precipitate in this liquid. The precipitate presents all the characteristics of phospate of lime, mixed with a little magnesia and iron. The presence of this last metal is detected from the rest very easily by the aid of hydro-sulphate of ammonia, yellow prussiate, infusion of galls, or cyauret of potassium.

Introduced into the apparatus of Marsh, this liquid gives no deposit, either upon the tube or saucer. We may say the same concerning the distilled liquid obtained by the treatment of the organs with sulphuric acid. This liquid contains no poisonous principle, for it gives no precipitate appreciable, to the various reagents which we have brought to act upon it.

The altered state in which these organs were found, permitted but little hope that a chemical research, with a view to discover an organic toxical agent, would be crowned with success. We had consequently reserved for this delicate research the contents of the other jar, which contained the stomach and the intestines; organs which, assailed ordinarily first by the poisonous substance administered, preserve also a greater length of time deposit and traces of them.

The stomach was examined with the greatest care. At the moment of removing it from the vessel which contained it, we were struck with the little alteration it presented in color, as well internally as externally. Tumeric paper when brought in contact with it, gave no appreciable alkaline reaction, a manifest sign of preservation, which is not little surprising, fifteen days after inhumation.

This kind of resistance to decomposition is observed frequently (and all toxicologists place great confidence in it,) when these organs have been brought in contact with antiseptic substances, and especially poisons which retard decomposition, and sometimes even entirely prevent it.

A similar observation is true with regard to the entire length of the intestinal tube, which, notwithstanding its known tendency to putrifaction, presented, so to speak, no traces of alteration, but on the contrary, all the characteristics of a healthy organ extracted from the body of a person dying in the full vigor of health.

Whatever deductions might be drawn from this special immunity, we divided the stomach into as small pieces as possible, and introduced the fragments into alcohol at 95° strength.

We divided one half of the intestines in the same manner, and placed together in the same receiver the finely separated fragments of these two organs. After a digestion of twenty-four hours at a temperature of 30° Cent, frequently agitated, the contents of the receiver were thrown on a filter, and washed with renewed applications of fresh alcohol until exhausted.

We obtained in this manner about 650 cubic centimeters of a yellowish alcoholic liquid, which was put immediately to evaporate in a salt-bath, until reduced to a soft extract. This extract was poured still hot into a small glass capsule, and immediately covered with parchment paper, glued to its edges, and which we labeled "A, Extract derived from the alcoholic treatment of the stomach and half the intestines of the widow de Pauw."

The soluble residue of the alcoholic treatment upon the filtre was treated with 250 cubic centimetres of boiling distilled water, and left to digest 24 hours, then placed upon a filter, and washed with 250 cubic centimetres of tepid distilled water. These liquids when filtered are submitted to an evaporation, and gradually brought to the consistency of a soft extract. This extract is introduced likewise into a small glass capsule, which is covered with parchment paper glued to its edges, and labelled "B, Extract derived from the treatment by hot distilled water of the stomach and one half the intestines of the widow de Pauw."

The insoluble residue of these two treatments we finally introduced, with 200 grammes pure concentrated sulphuric acid, into a glass retort provided with an extension and a receiver also of glass.

The heat was regulated in such a manner, that after three hours distillation there remained in the retort only a dry charred mass; and the receiver contains about 520 cubic centimetres of a highly colored liquid, having the odor of sulphuric acid, surmounted by a few drops of empyreumatic oil.

This distilled liquid evaporated in a platinum capsule, left no metalic residue, treated with the ordinary reagents for mineral substances, such as hydro-sulphuric acid, yellow prussiate of potash, &c., it furnished no metalic deposit even after 24 hours repose.

Various successive operations demonstrated to us that it contained only sulphurous acid, derived from the sulphuric acid used by us as a reagent in producing the carbonization; and a small quantity of oily matter common to decompositions of animal tissues, under similar circumstances.

The carbonized residue of the retort was finely pulverized, and digested for four hours with pure concentrated nitric acid. At the end of this lapse of time we added 250 cubic centimetres of hot distilled water, and proceeded to filter on Bezilius' paper.

The liquid which percolated first, added to that used in washing, was evaporated in a salt-bath, then finally, at a temperature of 120°, until the complete dissipation of all acid vapor. Mixed afterwards with a small quantity of distilled water, and filtered anew, the liquid left a small insoluble residue composed exclusively

of phosphate of lime and magnesia, and presents the following reactions: Treated with hydro-sulphuric acid even to the persistence of the odor of this acid, this liquid gives only slight deposit of sulphur; treated with hydro-sulphate of ammonia or sulphuret of sodium, it gives an abundant precipitate of a dark grey color, which an attentive and careful examination demonstrated to be only sulphuret of iron, mixed with a little sulphur, and a considerable quantity of phosphate of lime and magnesia.

The yellow prussiate gives rise to an abundant Prussian blue of very pure color.

Ammonia and caustic potash give a voluminous precipitate, containing phosphate of lime, iron, and magnesia, as well as a small trace of alumina. Iodide of potash occasions no precipitate, but only a slight discoloration, due to the presence of nitric acid.

The liquid introduced into a Marsh's apparatus furnishes neither spot nor ring, notwithstanding a carefully-regulated trial of three-quarters of an hour. From these facts, it results that the stomach and intestines did not contain any other metallic substance than iron, a metal normally abundantly present in these organs.

III. Examination of the floor of the chamber in which the widow de Pauw died.

This package consisted of articles inclosed in coarse linen cloth, carefully labeled, the labels and seals in a state of perfect integrity.

A written label bears the following inscription:

Public Seal No. 3,

Twenty-three boards of the floor, and four small pieces of wood, the whole derived from taking up eleven planks of the floor of the apartment in which the widow de Pauw slept and died.

Another package, bearing an intimate relation with the above, consists of a small parcel labeled

Public Seal No. 1,

Concretions scraped from the surface of the floor, and from places where the matters ejected in vomiting had fallen.

We proceeded to the examination of these two packages in the following manner: The boards from the floor were divided into two equal parts, of which one was immediately re-inclosed and labeled "Boards not examined by the experts." The other portion of the boards was at once submitted to a methodical scraping, but not very deep, the surface of each plank being raked by an appropriate iron instrument. The portions of matter detached were carefully collected on a sheet of white paper, and immediately introduced into a glass receiver containing a demi-litre of alcohol at 95°, carefully rectified. It was principally in the intervals which separate the boards of the floor, where are usually accumulated the filth and impurities which fall, that the matters were collected. These concretions, of which several were still moist, were carefully and

entirely detached from the edges of the boards, and reunited with the products of the superficial scraping, much less abundant.

The experts would observe that as the floor bore unequivocal marks of having been waxed, the scraping of the boards was very carefully performed, so as to avoid the introduction of too much foreign matter.

This operation of scraping, &c., having been performed, and the detached matters introduced into a receiver, the twelve boards were reinclosed and labeled "Boards examined by the experts Tardieu and Roussin," which, together with those not examined, were again introduced within the linen cloth originally inclosing them, and carefully secured with cords, seals, &c.

The contents of "*Public Seal No.* 1" were also placed in the receiver containing the 95 per cent. alcohol.

The grayish mass resulting from the mixture of the various matters collected in the manner specified, with the alcohol, was left to digest at a temperature of about 25° Centigrade, for twenty-four hours, frequently agitated to favor solution. At the end of this time the entire contents were placed upon a filter. When the filtration ceased, the insoluble residue was carefully washed with repeated applications of fresh alcohol, until the liquor had neither color nor odor.

The alcoholic liquids obtained by these processes, which presented a well-marked yellowish color, were mixed together and their evaporation carefully conducted so as to exclude the introduction of any foreign matter into the capsule which contained them.

When the liquid was thus three-fourths evaporated, it was transferred to a smaller capsule, and carried to the smallest possible volume.

The extract obtained was sufficiently abundant, weighing 16 grammes and 50 centigrammes, and presented the following characteristics:

Color brown, odor peculiarly rancid and unctuous, *taste very bitter*, and leaves no metallic residue after inceneration. Dissolved in water and filtered, it gives an abundant precipitate with tannic acid. In contact with sulp. acid it gives a purplish red color, and with hyd. chlo. acid a manifest green color.

An attempt to purify this extract by dialysis gave no satisfactory result, and was abandoned. This extract was placed in a small glass capsule and covered with parchment paper glued to its edges, and labeled: "O, derived from the alcoholic treatment of the matters scraped from the surface and cracks of the floor of the chamber of the widow de Pauw, portions soiled by the vomitings."

The residue, insoluble in alcohol, contained besides some earthy and organic matters, some remains of wood, scraps of pasteboard and paper, and a certain quantity of cement, such as is used by glaziers. This cement was found more particularly between the edges of the boards, where it had probably been placed to fill up the crevices.

We must say a few words of a small package marked "Public Seal No. 2," and labeled "Fragment of linen found upon the window-sill of the room occupied by the widow de Pauw, by the Judge of Instruction." This fragment of linen was 30 centimeters long and 20 wide, torn in several places and covered with stains—some black, some gray, and others yellowish. The most carefully-conducted examination could not detect the slightest trace of any poisonous substance upon it, either vegetable or mineral.

With the view of confirming the results furnished by the above experiments, it was necessary to submit to a similar treatment portions of the floor not soiled by the matters ejected in vomiting.

To this end the following "Public Seal" had been transmitted to us, which consisted of a small package done up in white paper, and labeled "Matters scraped from the floor of the chamber occupied by the widow de Pauw, in the part covered by the bed, that is to say, free from the matters ejected by vomiting."

Placed immediately to digest in alcohol of 95° strength, they have, after a digestion of twenty-four hours, at a temperature of 25°, and a carefully-regulated filtration, furnished an amber-colored liquid, but of an intensity much less than that of the preceding.

Evaporated to the consistency of a soft extract, this liquid leaves a mass of well-marked color, of an oily aspect, somewhat analagous to the extract O, but presents, so to speak, no bitter taste. This extract leaves no metallic residue after inceneration; it does not precipitate on the addition of tannic acid; and gives scarcely any color on the addition of sulp. acid or hyd. chlo. acid. The color communicated by the two last acids, has moreover no analogy to those developed by extract O.

This extract was also put into a small glass capsule and covered with parchment paper glued to its edges, and labeled "P, extract derived from the alcoholic treatment of the matters scraped from the floor of the room occupied by the widow de Pauw, in the part covered by the bed, that is, free from the vomitings."

The residue, insoluble in alcohol, contained besides earthy substances and various organic matters, such as wood, paper, pasteboard, &c., a considerable quantity of the same kind of cement previously mentioned.

The accused affirmed that the room occupied by the deceased had formerly been used as a laboratory and cabinet of photographers. The Judge of Instruction, in apprising us of this fact, requested us to take it into account in our experiments, and discuss the value of it in our report.

We observed, at very first sight, that the floor of the apartment did not present any black stains such as are usually furnished by nit. silver and the salts of gold, used so much by these artists. The most superficial examination carried the belief that there had been little or no photographic operations done in this chamber. The chemical substances generally employed in carrying on this business are the following: nit. silver, chloride of gold, cyanuret of

potassium, hyp. phos. of sodæ, sul. ferri, acetic acid. iodide and bromide of pot., bichloride of merc., bromide of cadmium, and collodion. Now among these substances, the acids gallic and pyrolignic, the hyp. phosphate of sodæ, sul. of iron, acetic acid, iodide and bromide of potassium and cadmium, and collodion, are not poisonous except in very large doses. The nitrate of silver and chloride of gold, falling upon the floor of wood, are always immediately decomposed and rendered insoluble and inoffensive. The cyanuret of pot., a very energetic poison, is decomposed rapidly in solution even when well corked, and still more rapidly when falling upon a floor of wood.

In the last case, it is beyond all doubt that in a few days there would be no traces of it, and that it would be readily transformed into carb. of Potassa, an entirely inoffensive substance. Corrosive sublimate is decomposed with more difficulty, and resists, to some extent, alteration, still it is more or less readily accomplished under the influence of organic matter—which changes it into an insoluble perchloride of merc. We were entirely convinced, after the most careful scrutiny, of the entire absence of murcury in matters scraped from the floor, and we can affirm that there existed no trace on the floor of this metalic poison.

The alcoholic solution which furnished extract O, contained no mineral substance, consequently not the slightest trace of a mercurial compound.

It results from these observations and experiments, that the sleeping apartment of the widow de Pauw, had it been formerly occupied as a photographic establishment, which appears very doubtful, would have furnished some evidence of the substances used by these artists in extract O.

The experts affirm this in the most positive manner.

IV. Detail of Physiological Experiments Practiced upon Animals with the Aid of Extracts A, B, O, P, Formerly Described.

Although chemical analysis does furnish us with certain and positive results in mineral and christallisable vegetable poisons, it does not always, under other circumstances, enable us to isolate the active principle of vegetable poisons, whose energy is nevertheless extremely virulent.

As experiments upon living animals can alone enable science to trace them up, and reveal their terrible effects, we have not failed under the present circumstances to resort to them. We have for this purpose instituted a series of experiments, to ascertain if some one of the poisonous substances, of the nature of those of which we have just spoken, is not contained in the product obtained by the analyses of which we have given an account; and which, it must not be forgotten, were obtained, either from the matters vomited by the widow de Pauw or from the organs extracted from her body.

Extracts used in making the experiments upon the animals:

1st. Extract O—derived from the alcoholic treatment of matters scraped from the floor of the chamber of the widow de Pauw, parts soiled by vomiting.

2d. Extract P—derived from the alcoholic treatment of matters scraped from the floor of the sleeping apartment of the widow de Pauw—in the part occupied by the bed—that is, not soiled by vomiting.

3d. Extract A—derived from the alcoholic treatment of the stomach and one-half of the intestines.

4th. Extract B—derived from the treatment by means of hot distilled water, of the stomach and one-half the intestines of the widow de Pauw.

Experiment First.

At five minutes past 1 o'clock, a vigorous dog of mean height, enjoying the best of health, was secured upon the table by two assistants, whilst an incission was made on the inside of the thigh, about three centimetres in length. Five grammes of Extract O, accurately weighed, was introduced beneath the skin, and the wound closed and reunited by a few points of suture.

Before this operation the strokes of the heart were 110 per minute; the dog abandoned to himself continued to walk about the room without manifesting either pain or apprehension.

In about three-quarters of an hour he lay down and began to lick the small wound. Towards half past 3 o'clock three successive attacks of vomiting occurred. The animal threw up each time glairy matters, impregnated with a little bile, and then lay down—his attitude anxious and dejected.

The heart indicated only 94 pulsations; these very irregular and intermittent, the hurried and tumultuous contractions sometimes suddenly ceasing for a few seconds, to be renewed in a few seconds with the same accelerated and hurried motion. The respiration more hurried than before the operation, and slightly intermittent; at 4½ o'clock the pulsations fell to 76 and the animal once more vomited.

At 8 o'clock in the evening he has lain down and is much more dejected, supports himself on his limbs with difficulty, the least movement he is compelled to perform is painful and provokes vomiting or an attempt at it.

The heart indicates 68 pulsations, and presents the same intermittent character as formerly, whilst they are more energetic and distinct than at 4½ o'clock.

At 8 in the morning the animal is almost cold; he appears, nevertheless, to have preserved all his intelligence for he is slightly agitated by the voice, and gives evidence of recognition.

The strokes of the heart less energetic and reduced to 40 per minute.

Their irregularity and their sudden intermittence are truly remarkable.

On feeling the pulse one can observe after a repose of a few seconds, at first 6 or 7 rapid beats, then an absolute arrest of movement. The throbbings recommence presently more or less violent, but always precipitate, then, as suddenly disappear to again as suddenly begin. Respiration is high, hurried and intermittent; these symptoms continue until 11 o'clock, when the animal expires without agony, apparently having preserved his intelligence until the last moment. At no time did he present the true comatose condition.

Autopsy practiced two hours after death revealed the following condition of things: The lungs, the stomach and the liver were in a normal condition; neither the cerebrum nor cerebellum presented any signs of congestion. The heart alone presented especial phenomena; the two ventricles were contracted in the most evident manner, whilst the auricles were dilated; all the cavities of the heart were filled with black blood, thick, and partly coajulated. This organ presented a deformation and kind of turgescence quite obvious.

At the apex of the heart, but especially upon the walls near this point, we observed, after raising the pericardium, some projections of a lively red color.

There could exist no doubt, after the different symptoms observed, and a result so characteristic of the autopsy, that the extract, O, administered to the animal by subcutaneous injection, had produced death by its special action on the functions of the heart.

Second Experiment.

At one o'clock and twenty minutes P. M., we weighed, with care, two grammes of extract O, which we dissolved and diluted in a sufficient quantity of water. This solution was immediately administered, with the aid of a glass funnel, to a healthy rabbit of mean height, well proportioned, which swallowed it without difficulty, and retained it until the end.

The symptoms observed were as follows:

Considerable diminution, intermittence, irregularity and precipitancy in the movements of the heart. Respiration appeared painful and slightly intermittent some moments before death.

At 3 o'clock and 15 minutes the pulsations were reduced to 41 per minute. At 4 o'clock and 15 minutes—that is, two hours and three-quarters after the introduction of the extract—the animal died.

The autopsy practiced next day revealed results identical with those witnessed in the preceding case. The brain, stomach and the liver were in a normal condition. The heart presented a sensible and manifest distortion; the auricles were dilated, as observed in the former case; the ventricles not only contracted but defined, in the most obvious manner, by their dark color, from the rest of

the organ. The interventricular space presents a notable and remarkable depression. The point of the heart is of a lively red color, and the walls exhibit several abnormal prominences, tinged with small circular red spots.

We do not hesitate to assert that the rabbit has, in the same manner as the dog, succombed in consequence of the introduction of a special poison contained in extract O—a poison which exerts its deleterious action more particularly upon the heart.

Third Experiment.

Near 1 o'clock and 30 minutes we weighed accurately 4 grammes of the extract P (obtained from the matters collected from that part of the floor covered by the bed, and not soiled by the vomiting), and having diluted it with a sufficient quantity of distilled water, we administered it, by means of a glass funnel, to a rabbit, in every respect like the last mentioned. The animal swallowed it, and did not return any of it subsequently by vomiting.

Two days afterwards it continued to enjoy the best of health. During all this time it continued to play around the room in which the experiment was made, and at no time gave any evidence of toxic influence.

Fourth Experiment.

At 3 o'clock P. M. we made an incision on the internal part of the thigh of a full-grown dog, vigorous and of mean height. Five grammes of a mixture of the two extracts, A and B (extracts derived from the stomach and intestines of the widow de Pauw), were deposited in the interior of the wound, of which the edges were reunited by some points of suture. At this moment the pulsations of the heart were 102 per minute.

At 4 o'clock and 15 minutes in the evening the animal was dejected and anxious; lay down, breathing heavily and intermittedly, the heart pulsating 86 times a minute; the animal had vomited, up to this time, twice.

At 8 o'clock in the evening the heart beat only 55 times in a minute, and was irregular and intermittent. Respiration was high and seemingly painful. The animal changed his position frequently, and uttered occasional stifled cries. He appeared to have preserved all his intelligence.

The next day, at 8 o'clock A. M., the strokes of the heart had increased to 90 per minute. The general condition was better, respiration seemed normal, and the anxious and depressed condition diminished; the animal got up and walked.

At 2 P. M. the contractions of the heart reached 9C, with only occasional irregularity, the intermittency still continuing; respiration good, and the animal ate with appetite.

The condition of the dog continued to improve, and at the moment at which we write—six days after the experiment—he is out of all danger, and the wound in the thigh nearly healed.

It results, from these observations, that the dog, which was the subject of them, was under a true toxical influence, in consequence of the subcutaneous injection of the extracts A and B. This animal has presented a train of symptoms in every respect analagous to those presented by the first two animals experimented upon. If he has escaped death, it is only because the poisonous substance was introduced in too small quantity, and the more vigorous reaction of the dog.

Fifth Experiment.

Four grammes of the preceding extracts, A and B, administered to a rabbit, with the same precautions as in the former case, produced death in so short a time as to lead almost to a supposition that an accidental complication had hastened the action of the poison.

Sixth Experiment.

The results of the preceding experiments tending to demonstrate that the poisonous substance of which we had observed the effects, exerted its influence in a special manner upon the heart, we were desirous of comparing its effects with those of digitaline, which influences so directly the actions of this organ; and more especially as there was more than one reason for believing it to have been the poisonous agent employed.

With this view three frogs were simultaneously submitted to comparative experiments, and gave the following results:

The heart having been exposed, we observed in all three an equality—almost absolute—in the number and stroke of each.

To the first, nothing was done but to keep the heart in a humid condition.

To the second, there was made, under the skin of the belly, an injection of 6 drops of a solution of 1 centigramme of digitaline in 100 drops of water.

The third received, under the skin of the belly, an injection containing 50 centigrammes of extract O, that which had been derived from the matters vomited upon the floor.

The following is a tabular view of the variations in the number and rhythm of the strokes of the heart of these three animals

	Frog No. 1. Pulsations.	Frog No. 2. Pulsations.	Frog No. 3. Pulsations.
After 6 minutes	42	20	26
" 10 "	40	16 irregular.	24 irregular.
" 20 "	40	15 "	20 "
" 26 "	38	0	12 very irregular.
" 31 "	36	0	0

With the two last frogs, when the heart had ceased to beat, the ventricles were contracted and the auricles dilated.

The muscular fibers of this organ examined microscopically, present no appreciable alteration in its anatomical elements.

Seventh Experiment.

We repeated a second time the comparative preceding experiments, with the identical same results, and in exactly similar conditions. On several occasions, besides, introduced under the skin of frogs, of which the heart had been exposed, a small quantity of extract O, and have always observed considerable diminution, with irregularity, in the contractions of the heart; the latter, towards the end of the experiment, never completely emptying itself of blood.

We insist upon making these details, because they offer a striking analogy with the scientific observations already made upon the characteristic phenomena of poisoning by digitalis, and especially with the alteration of the heart, pointed out by MM. Velpeau, Pelletan and Galion.

V. Analytical Examination of the Evidence and Affirmations relative to the State of Health of the Widow de Pauw; of the Symptoms which have preceded her Death, and the State of the Organs revealed by the Autopsical Examination.

We would leave our task unfinished if, after having searched for the presence of poison in the dejections of the deceased, and in the organs extracted from the body, did we not pursue the study of the phenomena of poisoning in the symptoms which this woman has experienced, and the lesions which the autopsy has revealed. It would also be pertinent to the subject to ask ourselves whether she had not in reality been attacked by a disease which would permit the reference of her death to a natural cause; or if, through motives to which we have not referred here, she had not been induced to simulate certain infirmities of health, although her health, even to the verge of her death, had not been seriously impaired. The evidence accumulated in our instructions—the correspondence of the widow herself—the advice and prescriptions which had been rendered her by several physicians—furnish us, upon these several points, the most accurate and valuable indications, and afford us the means of arriving at conclusions of a very positive kind.

The widow de Pauw died on the 17th of November last; the cadaveric autopsy has demonstrated in the clearest manner that she was not suffering from any organic affection. The brain, the lungs, and the heart, that is to say the organs essential to life, were healthy; and notwithstanding the supposition to the contrary, there existed neither intestinal hemorrhage nor perforation of the stomach. These are material facts which cannot be denied. Let us add that at the very verge of her death, the widow de Pauw was seen to devote herself to her accustomed occupation, and that her diet was in every respect such as would be suitable for a person in perfect health. The first alarming symptom she experiences is in

the night previous to her death, and consist of repeated and violent vomiting, with alarming depression.

The distinguished physician who saw her during her last moments, Dr. Blachez, chief of the faculty of clinic medicine, affirms that she was pale and much agitated, bathed in a cold sweat, and complained of an insupportable headache; the pulse very irregular, intermittent, and then imperceptible; the contractions of the heart tumultuous, irregular, ceasing at times, and at times almost suppressed. M. Blachez compares these symptoms to those which are observed in persons dying from rapid internal hæmorrhage. We must not loose sight of the fact that it is only a comparison, and a perfectly just one, expressive of the dominant feature of the case, namely, extreme debility of the central organ of the circulation. M. Blachez, in the means which he prescribed, directed all his efforts exclusively to the reanimation of the heart. It is impossible not to remark that these facts give a striking resemblance to those which were witnessed upon the animals.

To these positive facts is it sufficient to oppose mere hypothesis, interested assertions, or vague and incoherent hints, which would tend to show that this woman had been suffering for many years with a disease which would naturally tend to destroy her life.

A fall, alleged to have been made on her stair-case, was, according to her own statement, the commencement of her illness. "The fall (she writes on the 26th of September,) was so dreadful that the person who witnessed it and who went for a surgeon, did not expect to find her living. She vomited and spit blood by pots full; she threw up everything she swallowed, even water; * * she is killed inside, and suffers night and day. She had been to consult D. Godenot, who found her very ill. * *" And the next day she adds: "I have ceased to do anything, overwhelmed with suffering. The distress which I feel inside at the part on which I have fallen, is so severe that I cannot maintain any position with comfort;" in fine, at a later period she declares that M. Nelaton would not give her any hope.

There is here more than exaggeration; the immagination of Madam de Pauw completely perverts the facts. The fall over which she makes such a terrible ado had not in reality been followed by any serious results. It had caused neither fracture, concussion, nor external contusion; no person had ever seen traces of it, and the integrity of the organs, verified by an autopsy the most minute, proved that no lesion had internally been caused by the accident. Moreover no person seems to have partaken of the excessive fears of the widow herself.

M. Godinot, who asserts that he did not perceive the pretended contusions either upon the stomach or any other part of the body, did not look upon the case as very serious, since he was content with ordering some fomentations and lavements, with a mild regimen, and did not visit the patient again for three weeks or a month. When subsequently, whilst witnessing her sufferings at

the close of life, he spoke of the probability of perforation of the stomach, he committed an error, which was made manifest by the autopsic examination; but it was a very pardonable error, when viewed in connection with her reiterated assertions of the great injury she had sustained; more particularly as he had no reason to suspect any cause of death by violence or poisoning.

M. Nelaton, in reference to the prescriptions he had made for her gastric troubles, declared, as was easy to foresee, that he had never given so unfavorable a prognosis as had been attributed to him by the widow de Pauw.

As to MM. Velpeau, Danet, Desoomeux and Huet, they all agree upon one point, and their prescriptions verify the truth of the assertion, that they never regarded her health as seriously implicated. It must not be forgotten that several of these honorable gentlemen had examined her with reference to a policy for life insurance, and would have rejected her application had they not been satisfied her health was perfect.

In view of these facts, it is impossible not to be convinced that the widow de Pauw was entirely free from the disease which caused her death until a very few hours preceding it; that, until then, she was either entirely well, or had not, at all events, been attacked by any serious illness; and that in fine she had, without doubt, some sinister motives in creating the impression of her suffering, since she greatly exaggerated the consequences of a fall she had made, and had been, without obvious reasons, to consult a great number of physicians upon symptoms which rested upon no other basis than her own conflicting statements.

There are two things to which, in this connection, we should allude: first, the widow de Pauw was *enciente* about two months, and this early stage of utero-gestation might have produced some functional, gastric derangement; secondly, that she had several times had recourse, by the advice of those not physicians, to the use of very active medicinal agents, such as prussic acid and digitaline, as if she had been impressed that she would finally succumb with all the symptoms of poisoning produced by this latter substance.

Conclusion.

To sum up the experiments, and analyses of the statements which we have made in our exposé of the preceding facts, we conclude:

First. That the widow de Pauw died from the effects of poison.

Secondly. The poison which has destroyed her life is of the nature of those which, derived from the vegetable kingdom, leave no trace in the organs, and which cannot be isolated by chemical analysis, but reveal their presence by their effects, and are detected by their deadly action upon living animals.

Thirdly. We have, in effect, extracted not only from the matters vomited by the widow de Pauw upon the floor, but also from the organs submitted to analysis, a poisonous principle, which, experimented with upon living animals, has produced in them analogous

effects to those experienced by the deceased; and has caused them to perish in the same manner.

Fourthly. These effects and this action have a striking resemblance to those produced by *digitaline*, and without being able positively to affirm it, there is the strongest presumptive evidence of the fact that her death was due to this agent.

Fifthly. This woman was by no means sick before the day which preceded her death; the pretended affections of the heart and stomach, for which she had repeatedly consulted different physicians, as well as the deplorable consequences which she attributed to a fall, are so many fables of her own invention.

Sixthly. The cadeveric autopsy has demonstrated, in the most positive manner, that she had not died from injury received in a fall; nor from internal hemorrhage, or gastro-enteritis, either acute or chronic; or from perforation of the stomach; or any other natural cause.

Seventhly. Among the numerous and various objects seized at the house of the accused, we have pointed out a considerable quantity of poisonous substances, the possession of which cannot be justified by the requirements of a practicing physician, much less by the usages and teachings of the homeopathic school.

Eighthly. Among the poisons, we have pointedly drawn attention to the *large doses of digitaline*, and the amount already consumed by the accused.

(Signed) A. TARDIEU *and* R. ROUSSIN.

Paris, 28th Jan., 1864.

Cases of Gastralgia and Irritable Stomach; Use of the Purified Oxide of Manganese.

From the perusal of Dr. Leared's observations on manganese as a remedy in diseases of the stomach, Dr. Rogers was led to make a trial of this drug in cases of obstinate dyspepsia. Two of the patients in the following cases suffered from gastralgia; one from uterine derangement and sympathetic irritation of the stomach; and in the fourth, the discomfort after meals was probably caused by exalted sensibility of the mucous membrane in the manner described by Dr. Leared.

M. S., aged twenty-nine, a florid-looking married woman, had been under treatment for severe pain at the scrobiculus cordis, with occasional vomiting, since the latter part of November, 1863. Various remedies had been tried, none of them affording more than temporary relief. Dr. Rogers prescribed for the patient oxide of manganese in doses of ten grains three times a day.

Jan. 12th.—There was some difficulty in persuading her to persevere with the medicine, as she complained of its extreme "grittiness."

15th.—Has had no vomiting; less pain. To leave off eating supper, but before bedtime to take a dose of the mixture.

19th.—No pain after meals yesterday; bowels costive. To take a senna draught immediately.

29th.—Has not felt so "light and cheerful" for months, and is full of profuse expressions of gratitude. No nausea after taking the medicine.

Feb. 9th.—Discharged cured, but recommended to continue the mixture once a day for another week.

J. C., aged thirty-four, employed in the main drainage works. Had symptoms very similar to the above, for which he had been treated early last autumn at the hospital, but soon discontinued his attendance. He came again on Jan. 19th, and attributed all his "queer pain" to the beer he drank, but could not make up his mind to forego his favorite luxury. The manganese was given in doses of ten and fifteen grains three times a day, the diet not being altered in the least. On the 9th of February he was discharged well, having taken altogether sixty-two doses of the manganese.

H. D., aged twenty, a young woman of nervous temperament. Suffers from leucorrhœa, and a few months since was in the hospital under the care of Mr. Bird, who removed a vascular excrescence from the urethra. In addition to leucorrhœa, she complains of hypogastric pains, disrelish for food, and considerable thirst. There is a constant pain at the epigastrium, and occasionally rejection of the food immediately after it is swallowed. Dr. Rogers contemplated giving the oxide of silver, but the manganese has already done so much to relieve the gastric irritability that it is hoped a persistence in its use will effect a cure.

The fourth case is that of A. G., aged twenty-four, a laundress, who had constant heartburn and great discomfit after every meal, most likely attributable, as before stated, to unduly exalted sensibility of the mucous lining of the stomach, arising either from an irritable condition of the nervous filaments, or from excessive secretion of gastric juice, accompanied by increased vascularity. This patient was also troubled with shifting rheumatic pains. The uterine functions were regular; the bowels rather costive; tongue dirty. Bismuth gave no relief, and the mineral acids and bitter tonics were tried, but with no good effect. At times she was compelled to leave off work for a week together. Hydrocyanic acid and soda palliated the symptoms, but she was soon as bad as ever. On the 15th of January she commenced taking the oxide of manganese in ten grain doses three times a day, and steadily continued it up to the 9th of February, when she stated that she was free from all uneasiness, and was about to take a new situation.

These four cases which are not picked ones, but such as come before the hospital physician every time he attends in the out-patient rooms, are intended further to illustrate the effects of a valuable agent which Dr. Leared has already so successfully em-

ployed in the treatment of forms of certain dyspepsia. Its comparative cheapness is, as Dr. Leared says, a great recommendation for hospital practice. Independently of this, however, there is a strong probability that Dr. Leared is correct in affirming its superiority to bismuth in many cases of gastralgia.

At the West London Hospital the purified oxide of manganese is procured as originally recommended from Messrs. Garden and Robins, of Oxford street. It has not yet been exhibited in the form of powder, but as a draught; the compound tragacanth powder being used to suspend the manganese. It may be as well to mention that Dr. Neligan has recommended the *sulphate* of manganese in dispeptic affections and billious disorders, not with a view of sheathing the mucous surface denuded of its epithelium, which is Dr. Leared's aim, but of promoting increased biliary secretion.—*London Lancet.*

Case of Spotted Fever.

[To the Editor of the American Medical Times.]

Sir,—As much interest is felt in all that relates to Spotted Fever, I send you the following notes, though imperfect, of a case lately under my care: I was called May 6th, 1864, to J. L. M——, male, æt. 18 years; found him suffering from intense headache; rigors; eyes suffused, and somewhat swollen; pulse rapid and rather full; not inclined to converse, although if spoken to he would answer in the shortest possible way. I found upon inquiry that for a day or two he had been drooping, and unable to attend to his usual duties. I prescribed a mild cathartic sinapism to back of neck and spine, and diaphoretics after the operation of cathartic. 7th.—Somewhat relieved of febrile symptoms, but still suffering from headache; still disinclined to converse, only answering in monosyllables. As has been remarked, the symptoms were of those attending influenza, though in an aggravated form. 8th.—Pulse rather variable; pain in head still continues; tongue heavily coated and white. 9th.—Pain complained of in right ear, and not as much headache; could detect no swelling. At this time my attention was called to an eruption upon the arm. Upon examination, I found not only upon the arm but covering nearly the entire surface of the body, an eruption of circular spots, not elevated, of a bluish color, not unlike ecchymosis. The spots were entirely distinct; in size about half that of a five-cent piece. This eruption lasted for three or four days, gradually fading away, with some desquamation of cuticle.

On the 13th or 14th an abscess broke and discharged from the ear; discharge continuing for some days. Improvement was gradual, but under the influence of tonics, quinine, etc., patient improved favorably until the fourteenth day of the disease, when he left for his home in Western New York. C. C.

Putnam Co., N. Y., July, 1864.

Report on Chloroform.

About two years ago the Royal Medical and Chirurgical Society of London appointed a Committee to inquire into the various points relating to the uses and administration of chloroform. The Committee was composed of the leading surgeons and physicians of London, and the results of their investigations are to have great weight. We cannot better present the substance of this report than in the following abstract condensed from a London contemporary :—

Among the topics embraced in the Report were the following: How chloroform destroys animal life; Effects of chloroform on the heart's action, and on the respiration; Effects of division of the pneumogastric nerve; Effects of chloroform on the glottis and fauces; Effects of ether; *Post-mortem* examination of animals destroyed by chloroform; Resuscitation in apparent death from chloroform; Rules to be observed in cases of threatened death from chloroform; Uses of chloroform in surgery, and in obstetric practice and the diseases of women and children, etc.

In investigating the manner in which chloroform destroys life, the Committee had made a number of experiments, chiefly on dogs. Mr. Clover's apparatus was used for the administration of air impregnated with from 1 to 14 per cent. of chloroform; and, for mixtures of air and chloroform containing 40 per cent. or more of the latter agent, an apparatus was employed which allowed heat to be applied. The duration of animal life was found to be in an inverse ratio to the strength of the chloroform. A mixture containing from 1 to 2 per cent. was generally safe. When the strongest doses of chloroform were given, the pulse and respiration ceased almost simultaneously; while the action of the heart continued somewhat longer. When the chloroform was inhaled in full doses through an aperture in the glottis, death was more rapidly induced, and the heart's action ceased before the pulse; while the results of the administration of small or moderate quantities in this way differed little from those obtained by ordinary inhalation.

Observations with the hæmadynamometer showed that the administration of chloroform was first attended with an increase of the heart's action, which was observed even when there was but slight struggling on the part of the animal. This increased action, however, seldom continued above a fraction of a minute; after this, there was a gradual diminution, which, however, was liable to interruptions. The arrests in the fall of the heart's action appeared to correspond with the periods when respiration was lowered, and were therefore believed to be connected with a diminution in the quantity of the poison imbibed; they were also modified by the introduction and withdrawal of air. In several instances, movements of the heart were observed, after the cessation of the rhythmic action of the organ. The duration of the rhythmic action of the heart was longest in cases where the strongest doses of chloroform had been used; and

this was explained by supposing that, in such instances, the cessation of movements denoting life is more rapid, while the heart is more gradually and thoroughly enfeebled by the prolonged administration of smaller quantities.

With regard to respiration, it was observed that the concentrated vapor of chloroform produced spasm of the fauces and glottis, but only for a few seconds. After this, and when moderate doses were given, the respiration was increased in quickness for a time. The inspirations were at first deep; but subsequently became more and more shallow and less frequent, until arrest took place. Recovery could be produced in from twenty to forty seconds, if the chloroform were withdrawn; and this could be repeated two or three times. The explanation of the recovery offered was, that the entrance of the chloroform into the lungs was interrupted by the arrest of respiration, while at the same time that which had already been introduced was eliminated. The effects of ether were found to differ from those of chloroform in several respects. This agent exerted on the heart a stimulating effect, less sudden and more prolonged than that of chloroform; and, during insensibility, the pressure of the column of blood in the hæmadynamometer was maintained up to the period of death, and until respiration had ceased; while its failure under chloroform occurred at an earlier period.

The Committee had made observations with the object of ascertaining the best means of avoiding accidents in the use of chloroform, to the agent employed, and to the method of administering it. A mixture containing from 2 to 4 per cent. of chloroform vapor and 96 or 98 per cent. of air might be inhaled without danger to life; and, if necessary, 4 or 5 per cent. of chloroform vapor might safely be used; but 10 per cent. was liable to produce dangerous symptoms. Ether to a certain extent fulfilled the conditions required; but the slowness of its action and its disagreeable odor were objections to its employment. In the absence of any other known anæsthetic agent capable of fulfilling the indications required, of efficacy and prompt action combined with safety, the Committee had made experiments with certain combinations of chloroform and ether; viz., *a*, a mixture proposed several years ago by Dr. Harley, containing 3 parts of ether, 2 of chloroform, and 1 of alcohol; *b*, one containing 4 parts of ether and 1 of chloroform; *c*, a mixture of 2 parts of ether and 1 of chloroform. The mixture *b* was found to be very similar in its effects to ether; air containing 15 per cent. of it might be inhaled with safety, but its action was very slow. The mixtures *a* and *c* were very similar in action, and were in this respect intermediate between ether and chloroform. In the human subject, insensibility could be produced by them with sufficient rapidity; and in animals could be maintained thirty or forty minutes without destroying life.

The effects of chloroform, the Committee had been led to conclude, depend much more on the degree of concentration of the agent than

on the mode of administering it. In the absence of any means of determining the quantity of chloroform vapor, the Committee thought the plan of administering chloroform on a handkerchief or lint least liable to objection. It should be held an inch and a half from the mouth, so as to freely admit air.

In regard to resuscitation after apparent death, the result of the inquiries of the Committee was, that artificial respiration by Dr. Silvester's method, *applied early*, was the most efficacious and easy plan. The cold douche on the face and chest was very inferior. Electro-galvanism and electro-magnetism were in many instances very effectual; but they were not to be preferred in desperate cases, and were not equal to artificial respiration. Indeed, the Committee held that artificial respiration should never be delayed in order that other means might be tried; it should be employed instantly, when alarming symptoms set in.

The Committee were of opinion, that chloroform ought never to be administered by careless or inexperienced persons. It should not be administered immediately after food, but three or four hours afterwards; and, in cases of much depression, a little brandy might be first given to the patient. The recumbent position was preferred; in the sitting posture, there is danger of syncope. The chloroform should be given slowly, and sudden increase should be avoided as being dangerous. The person administering it should carefully watch the respiration, and keep one of his hands free, so as to be able to examine the pulse from time to time. When pallor, failure of the pulse, or other dangerous symptoms appear, the chloroform must be withdrawn, and free access of air allowed; the tongue should be drawn forward, and the mouth and fauces cleared; the patient must be kept in the recumbent posture, and cold water should be dashed on his face, and the thorax compressed so as to favor respiration. In more severe cases, artificial respiration must be employed at once. The period within which resuscitation is possible varies from two to ten minutes.

In surgical practice, the administration of chloroform, in the opinion of the Committee, is not contra-indicated by the presence of heart-disease; but fatty degeneration of the organ requires care. Chloroform may be given, with proper management, in operations on the mouth and throat. In operations on the deeper parts of the eye, it is undesirable, from the vomiting which may be induced. In hernia, it is highly valuable; and in operations about the anus it is indispensable. The examination of the results of 2586 capital operations performed before chloroform inhalation was introduced, and of 1860 operations of similar character performed subsequently, proved that the rate of mortality had not been increased since the introduction of chloroform.

In obstetric practice, the use of chloroform in natural labor is not attended with danger; no well-authenticated cases of death from its use having come to the knowledge of the Committee, although sometimes unfavorable symptoms have been produced. It may, in

moderate doses, protract labor; but does not always do so. It does not predispose to convulsion, nor does it interfere with lactation or with the general condition of the mother and child. In artificial labor, the inhalation of chloroform is very useful in many cases; but as a rule, should not be employed when there has been much hemorrhage, unless stimulants be also given. Chloroform is also useful as a means of facilitating diagnosis in diseases of women; and, both inhaled and applied as a liniment, in severe cases of dysmenorrhœa, neuralgia, etc. Chloroform inhalation was also favorably reported on as a remedy in the convulsive diseases of women and children.—*American Medical Times.*

Assimilation of Isomorphus Substances.

E. Roussin has performed a series of experiments on hens and rabbits, in order to ascertain whether similarity in form and composition is accompanied by any peculiar physiological properties. In one series of experiments, he investigated this question with regard to the shell of the hen's egg. This contains 90 per cent. of carbonate of lime; and he endeavored to ascertain whether other isomorphus carbonates could be made to replace the lime-salt in the shell. Accordingly, some hens, some time before laying, were shut up in wooden cages, at a distance from the ground and from any wall, and were fed with potatoes and oatmeal, or with oatmeal moistened with water. With their food, the substances with which the experiments were made, were mingled. The result of these experiments was, that carbonates of baryta, strontia and magnesia, peroxide of manganese, protoxides of iron, zinc, copper, lead, cobalt, or the oxides of these metals, were readily assimilated by the hens and eliminated in the coverings of their eggs. Alumina, sesquioxide of iron, manganese, and the oxides of antimony, were never found in the egg-shell.

Another series of experiments had relation to the soft parts of the egg. The albumen and yolk yield, on calcination, a notable proportion of chloride of sodium. As the alkaline iodides, bromides, and fluorides are isomorphus with this salt, it was endeavored to ascertain whether, after their administration, iodine, bromine, or fluorine, would be found in the egg. Not only was this the case, but the quantity of these elements present in the egg was remarkably large. They were apparently distributed in equal proportions between the albumen and the yolk. Eggs containing bromine, iodine, or fluorine, have no peculiarity of taste; and it is suggested that this observation may be made useful for therapeutic purposes.

The administration of the alkaline iodides, and especially of the bromides, was accompanied by a singular phenomenon, viz., the gradual disappearance, in some instances, of the calcerous cov-

ering, in proportion to the increase of the above named substances in the interior of the egg. This occurred in hens left at liberty, and having free access to carbonate of lime; and was not generally observed in strong birds with good appetite.

In a third series of experiments, it was endeavored to ascertain whether arseniate of lime could be assimilated and substituted for phosphate of lime in the bones—the arseniates being isomorphus with the phosphates. The result was found to be that, when small quantities of arseniate of lime are introduced into the food of a female rabbit, the animal gives birth to young whose bony skeleton contains a notable proportion of arsenic, while their muscular tissue contains scarcely any traces. The arsenical compound is also eliminated by the urine in the form of arseniate of ammonia and magnesia.

M. Roussin concludes from his experiments, that substances isomorphus chemically are assimilated and eliminated in a like manner from the animal economy, and may be regarded as isomorphous in a physiological point of view.—*Gazette Méd. de Paris, and Br. Med. Jour.*

A Singular Case of Fatal Injury. By C. S. Wood, M.D., Surgeon U.S.A.

Charles N. Wallace, Irish, æt. 32, enjoying good health, married, an orderly of General Wright, was found on the morning of June 16th, 1864, lying in a state of unconsciousness near the stable door with the horse, which he evidently was about mounting, standing near saddled and bridled, with the halter tied around his neck. How long he had lain in this condition it was impossible to say. He was at once taken to his residence near by, where I was summoned, when I found the skull laid bare over the right temporal region to the extent of two inches, accompanied with facture of the bones (stellated); no evident depression. He was, although unconscious, very restless, tossing himself about from one side of the bed to the other, rising up and constantly changing his position, which, with a feeble pulse, short breathing, paleness of the surface, coldness of the extremities, cold clammy perspiration, &c., led me to believe he had sustained more serious internal injuries; and on further examination, found evidence of the horse having stepped on him, in the right groin, just above the pubes and directly over the track of the femoral vessels. The tissues of the whole thigh, extending to the knee, were nearly double the size of the opposite, and infiltrated with blood. This infiltration extended to the scrotum, and up the abdomen, nearly to the umbilicus. A blood vessel was ruptured, and he was dying from hæmorrhage; but what could be done? It was impossible to say what vessel was ruptured, or at what point; besides, he had already lost sufficient blood to prove fatal. The friends were apprised of the re-

sult which soon occurred, as he continued to become more and more restless, the pulse ceasing at the wrist, the extremities becoming cold, and died just at night, without in the least degree regaining his consciousness. From the nature of the injuries it appeared he must, in endeavoring to mount the horse, have fallen, when the animal turned and trod on him at both points of injury.

Autopsy twenty hours after death, assisted by Drs. Harkness and Nixon of Sacramento, California.—On making a triangular incision from the umbilcus to a position each side, midway between the superior anterior spinous process of the ilium and the pubes, and turning down the integuments, large quantities of coagula liberated themselves, besides being so infiltrated with blood as to increase their thickness to more than double their ordinary dimensions. On extending the incision down the left thigh, the same conditions presented themselves, liberating from this region more than two quarts of coagula. On carefully tracing up the femoral artery, a rupture was found of its entire coats large enough to admit the end of the finger, almost directly beneath Poupart's ligament, which fully explained the cause of death. The scrotum and pelvic cavity were also filled with blood, extending up over the peritoneum, but not within it. No injury of the intestines or bladder.

The case, to me, is somewhat of an anomaly, as the artery, heretofore sound and in a healthy condition, was completely ruptured without destroying the integrity of the superincumbent tissues.—*Amer. Med. Times.*

SACRAMENTO, CAL., *June 20th*, 1864.

A New State Emigrant Hospital.

A select company assembled at Ward's Island on the 10th inst. to witness the ceremony of laying the corner-stone of the New State Emigrant Hospital.

After an impressive prayer by the Rev. Mr. Peters, Mr. G. C. Verplanck, the venerable President of the Commissioners of Emigration, entertained the audience with a learned and eloquent address, in which he furnished a large amount of statistical information connected with the history of of this enterprise. Taking the trowel he then proceeded with the usual ceremonies to lay the corner-stone, in which was first deposited a box containing Reports of the Commissioners of Emigration from 1849 to 1863; Reports of the Emigrants' Savings Bank from 1850 to 1863; Plans and Specifications of the building; New York daily papers; State Manual of New York; Manual of the City of Brooklyn; Coins; Fractional Currency, and business cards of some of the gentlemen present. The *Gloria in Excelsis* was then sung, in which a great number of voices joined, and the benediction pronounced by the

Rev. Mr. Peters, after which the company adjourned to the house of the superintendent, where they partook of a sumptuous dinner. Speeches were made by Mr. Verplanck, Thurlow Weed, E. F. Purdy, Dr. Carnochan, and a number of other eminent citizens. The following is a description of the new hospital:

The hospital buildings are five in number, arranged upon the pavilion plan, the center building being three stories high, the other four buildings two stories high, separated by a wide court-yard, completely isolating them from each other. The wards are upon the southern portion of each pavilion, and the cold northern storms are cut off from each ward by the nurses' room, dining-room, closets, hall, &c., thereby equalizing the temperature of the wards and assisting in their ventilation. Each of the pavilions is connected by corridors large enough to be used by the convalescent patients as a sanatorium, and they are to be furnished with books, papers, and other sources of amusement. These sanatoriums are sufficiently separated from the wards to enable the convalescents to amuse themselves without disturbing the patients who are unable to leave their beds. These corridors serve also to connect the several pavilions, bringing them all under one roof, enabling the officers and attendants to visit all parts of each pavilion without being exposed to the open air. They also simplify and aid the ventilation and warming of the entire hospital. The ventilation and warming will be done by steam taken from the boilers placed in a disconnected building, to be located near the center of the hospital. These boilers also supply the steam for the kitchen, laundry, and bakery.

The hospital will accommodate the superintendent's offices, reception room, physician's offices, apothecary's shop, laboratory, baggage and store rooms, large operating theatre, museum, instrument room, and all the necessary nurses' rooms, dining rooms, water-closets, bath rooms, and bedding rooms for each ward. The wards will accommodate three hundred beds. Each bed will have twelve hundred cubic feet of air, which is the largest number of feet allowed in any of the best existing hospitals. The building will be plain in style, appropriate to the purpose for which it is intended, and will be built in a substantial and thorough manner throughout, at an expense of about three hundred thousand dollars.—*Amer. Med. Times.*

Post-Partum Hæmorrhage.

In an able communication on post-partum hæmorrhage, now publishing in the Medical Circular, by Dr. J. L. Early, obstetric surgeon to the Queen's Hospital, Birmingham, we select the following:

As well known, the late Dr. Rigby recommended the application of the child to the breast soon after delivery as a means of preventing post-partum hæmorrhage. I have tried this plan, and

found it answered in some cases, while it failed in others. In order to apply the child to the breast, the mother is obliged to make some exertion, for the breast has to be exposed; then this plan fails very often, because the child will not or cannot suckel. The new-born infant is sometimes disinclined to suckel immediately after its birth; or it cannot do so from the mother having a small or flat nipple, or from some fault on its own side, as cleft palate, or tied tongue, for example. The mother, in her anxiety to make the child take the breast, moves herself, thinking that perhaps her position is awkward to the infant, or she pulls the child to her, and tries by every means in her power to make it take hold of the nipple. These movements of the patient are liable to place her in danger; and I have seen one or two instances of flooding after labor, the cause of which I could not attribute to anything else but the exertion made by the mother in the often fruitless attempts to get the child to suckel. For the above reasons, I have for some time discontinued the application of the child to the breast as unsatisfactory.

In its place, however, I substitute, in cases where the uterus seems disinclined to contract, a plan which is exactly the same in principle, has all the advantages, without any of its disadvantages. It consists of compression of the breast with the hand. If we place one hand upon the uterus, while we grasp the breast with the other, the uterus will be felt to contract almost instaneously. As the patient lies on her left side, the hand should be passed under the axilla of her right arm; the hand will then come at once upon the breast. Gentle compression or squeezing of the breast should be employed at regular intervals. Latterly, I have somewhat modified the mode of exciting sympathy between the breast and uterus. Instead of squeezing the breast, I imitate the sucking action of an infant by placing the thumb and index finger on each side of the nipple, about an inch and a half or two inches from each other, and then I draw them forward just in the same way as if I were desirous of drawing a little milk to the apex of the nipple for microscopal examination in case of suspected pregnancy, only the action must be much quicker, and repeated frequently. As a preventive means, there is no necessity for the medical attendant to use this precaution himself. The nurse should be shown how to manage it. She merely has to pass her hand under the axilla of the arm of the patient, feel for the nipple outside the chemise, and use the thumb and finger as described. In some cases when I am going to remove the placenta, I direct the nurse to place her left hand upon the breast, and the right hand on the uterus, and press them both at the same time, while I remove the placenta. It assists in insuring a firm contraction of the uterus.

The irritation of the mamma with the hand is preferable to the application of the child to the breast, for the following reasons: 1. It insures perfect rest to the mother. 2. It can be kept up for any length of time. 3. There is no chance of failure in its application.

It is not requisite to employ this precaution in every instance; only in those cases where the uterus feels flabby, and there is great difficulty in stimulating it to contract. Before leaving the house, if I have any apprehension of hæmorrhage commencing after my departure, I give the nurse directions to continue its employment for some considerable time.

[From the Washington Chronicle.]

The Case of Surgeon-General Hammond.

We present our readers this morning with the report of the Judge Advocate General in this remarkable case, which engrossed a court-martial for so many weeks, together with the President s order in confirmation of the sentence of the court. The following officers composed the court:

Major-General R. J. Oglesby, Vols., President.
Brigadier-General W. S. Harney, U.S. army.
Brigadier-General W. J. Ketchum, U.S. vols.
Brigadier-General G. S. Greene, U.S. vols.
Brevet Brigadier-General W. W. Morris, colonel 2d U.S. artillery.
Brigadier-General A. P. Howe, U.S. vols.
Brigadier-General J. P. Slough, U.S. vols.
Brigadier-General H. E. Paine, U.S. vols.
Brigadier-General J. C. Starkweather, U.S. vols.
Major John A. Bingham, judge advocate.

JUDGE ADVOCATE GENERAL'S OFFICE,
May 17, 1864.

To the Honorable the Secretary of War:

Brigadier-General William A. Hammond, Surg.-General, United States army, was tried upon charges of "disorders and neglects, to the prejudice of good order and military discipline," "conduct unbecoming an officer and a gentleman," and "conduct prejudicial to good order and military discipline."

The specifications which set forth the statement of facts alleged, and found by the court to constitute these offences, are as follows:

CHARGE 1st—"Disorders and neglects, to the prejudice of good order and military discipline."

Specification 1st—"In this: that he, Brigadier-General William A. Hammond, Surgeon-General, United States army, wrongfully and unlawfully contracted for, and ordered Christopher C. Cox, as acting purveyor in Baltimore, to receive blankets of one William A. Stephens, of New York. This done at Washington city, on the seventeenth day of July, in the year of our Lord one thousand eight hundred and sixty-two."

Specification 2d—"In this: that he, Brigadier-General William A. Hammond, Surgeon-General as aforesaid, did, on the thirtieth day of May, in the year of our Lord one thousand eight hundred

and sixty-three, at Washington city, wrongfully and unlawfully prohibit Christopher C. Cox, as medical purveyor for the United States in Baltimore, from purchasing drugs for the army in Baltimore."

Specification 3d—"In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States army, did unlawfully order and cause one George E. Cooper, then medical purveyor for the United States, in the city of Philadelphia, to buy of one William A. Stephens blankets, for the use of the Government service, of inferior quality; he, the said Brigadier-General William A. Hammond, then well knowing that the blankets so ordered by him to be purchased as aforesaid were inferior in quality, and that said Purveyor Cooper had refused to buy the same of said Stephens. This done at Philadelphia, in the State of Pennsylvania, on the twenty-eighth day of May, in the year of our Lord one thousand eight hundred and sixty-two."

Specification 4th—"In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General as aforesaid, on the fourteenth day of June, in the year of our Lord one thousand eight hundred and sixty-two, at the city of Washington, in the District of Columbia, unlawfully, and with intent to aid one William A. Stephens to defraud the Government of the United States, did, in writing, instruct George E. Cooper, then medical purveyor at Philadelphia, in substance as follows:

"'SIR: You will please purchase of Mr. W. A. Stephens eight thousand pairs of blankets, of which the inclosed card is a sample. Mr. Stephen's address is box 2,500, New York. The blankets are five dollars per pair.'"

Specification 5th—"In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States army, on the sixteenth day of June, in the year of our Lord one thousand eight hundred and sixty-two, at the city of Washington, did corruptly, and with intent to aid one William A. Stephens to defraud the Government of the United States, give to the said William A. Stephens an order, in writing, in substance as follows: 'Turn over to George E. Cooper, medical purveyor at Philadelphia, eight thousand pairs of blankets;' by means whereof the said Stephens induced said Cooper, on Government account, and at an exorbitant price, to receive of said blankets, which he had before refused to buy, seventy-six hundred and seventy-seven pairs, and for which the said Stephens received payment at Washington in the sum of about thirty-five thousand three hundred and fourteen dollars and twenty cents."

Specification 6th—"In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States army, on the thirty-first day of July, in the year of our Lord eighteen hundred and sixty-two, at the city of Philadelphia, in the State of Pennsylvania, well knowing that John Wyeth and Brother had before that furnished medical supplies to the medical purveyor at

Philadelphia, which were inferior in quality, deficient in quantity, and excessive in price, did corruptly, unlawfully, and with intent to aid the said John Wyeth and Brother to furnish additional large supplies to the Government of the United States, and thereby fraudulently to realize large gains thereon, then and there give to George E. Cooper, medical purveyor at Philadelphia, an order, in writing, in substance as follows:

"'You will at once fill up your store-houses, so as to have constantly on hand hospital supplies of all kinds for two hundred thousand men for six months. This supply I desire that you will not use without orders from me.'

"And then and there directed said purveyor to purchase a large amount thereof, to the value of about one hundred and seventy-three thousand dollars, of said John Wyeth and Brother."

Specification 7th—"In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States army, about the 8th day of October, in the year of our Lord eighteen hundred and sixty-two, at Washington city, in contempt of, and contrary to the provisions of the act entitled 'An act to reorganize and increase the efficiency of the medical department of the army,' approved April 16, 1862, did unlawfully direct Wyeth and Brother, of Philadelphia, to send forty thousand cans of their 'extract of beef' to various places, to wit: to Cincinnati, St. Louis, Cairo, New York, and Baltimore, and send the account to the Surgeon-General's office for payment."

CHARGE 2d—"Conduct unbecoming an officer and a gentleman."

Specification 1st—"In this: that he, Brigadier-General William A. Hammond, Surgeon-General, United States army, on the thirteenth day of October, in the year of our Lord eighteen hundred and sixty-two, at Washington city, in a letter by him then and there addressed to Dr. George E. Cooper, declared in substance that the said Cooper had been relieved as medical purveyor in Philadelphia, because, among other reasons, 'Halleck,' meaning Major-General Henry W. Halleck, General-in-Chief, requested as a particular favor that Murray might be ordered to Philadelphia; which declaration so made by him, the said Brigadier-General William A. Hammond, Surgeon-General, as aforesaid, was false."

An additional charge and specifications preferred against Brigadier-General William A. Hammond, Surgeon-General, United States army:

CHARGE 3d—"Conduct to the prejudice of good order and military discipline."

Specification 1st—"In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States army, on the 8th day of November, A. D. 1862, at Washington city, did unlawfully order Henry Johnson, then medical storekeeper and acting purveyor at Washington city, to purchase three thousand blankets of one J. P. Fisher, at the price of $5.90 per pair, and to

be delivered to Surgeon G. E. Cooper, U. S. A., medical purveyor at Philadelphia."

A plea of not guilty was entered upon each of the charges and specifications, and after a full hearing of the testimony for the Government and the defense, and the examination of a large amount of documentary evidence, together with the consideration of the elaborate arguments of both sides, the court rendered a finding of guilty on all the charges, and sentenced the accused to be dismissed the service, and to be for ever disqualified from holding any office of honor, profit, or trust, under the Government of the United States.

In reporting upon this case, the second charge—conduct unbecoming an officer and a gentleman—will be first considered.

Under this charge it was alleged that accused made a false declaration, in writing, that Dr. Cooper had been relieved from his position as medical purveyor at Philadelphia, because, among other reasons, General Halleck had requested, as a particular favor, that Dr. Murray might be ordered to duty in that city.

It appears from the evidence that, on the 8th of October, accused requested of the Adjutant-General that Dr. Cooper be relieved from duty as medical purveyor at Philadelphia, by Dr. Smith. On the 13th he wrote a letter to Dr. Cooper, as follows:

"My Dear Doctor,—I have just received your note. The detail for your relieval from duty went to the Adjutant-General a few days since. I told Smith to tell you of it. It was with great reluctance, even with pain, that I made the detail. I am entirely satisfied with your energy, faithfulness, and acquaintance with your duty; but I found great complaints made in regard to your manners, which were constantly reiterated from medical officers and citizens of standing. I believe the change would have been made over my head had I not made it myself. I was forced to come to the conclusion that it was necessary to be done. Once before the detail was made, but I would not sign it, and this time it lay on my table several days. This is one reason. The second is even more imperative. Halleck requested, as a particular favor, that Murray might be ordered to Philadelphia. There was nothing for Murray to do there but to take your place, King's, or Smith's. The latter have both been in active service, and I thought it best to relieve you on that account.

"As A. K. Smith is, in my opinion, better suited to perform the duties of purveyor than Murray, I decided to make him purveyor, and Murray medical director of transportation.

"I assure you that, so far as your official action is concerned, I have not the least fault to find.

"Yours sincerely,

"W. A. Hammond."

General Halleck testified, substantially, that "to the best of his recollection," he never made any request of the accused to order Dr. Murray to Philadelphia; the only communication he ever made to him on the subject being a letter on the 1st of October, stating

that Dr. Murray had served long and faithfully in the field, with the army in the West, and would like to be transferred to Eastern hospital duty, and asking the consideration of his case.

On the part of the defense, a letter from Dr. Murray to General Halleck, dated Louisville, September 27th, was submitted, in which Dr. Murray stated to General Halleck, that if he would request the Surgeon-General to order him to Philadelphia, it would "be done at once." And it was claimed by the accused—but not shown—that General Halleck, besides writing the letter of October 1st, in which he asked that Dr. Murray's desire to be ordered East on "hospital duty" might be considered, also, in some personal interview, made a verbal request that he be assigned to that duty in Philadelphia.

The argument of the Judge Advocate on this charge may be found on pages 57 to 59 of his "Reply," and that of the counsel for the accused on pages 51 to 53 of the "Defense."

The findings upon the first and third charges involve questions of law as well as of fact.

It was contended by the accused (see pages 9 to 16 of the "Defense") that the Surgeon-General had the power to control all purchases of stores for his department; to order purveyors when, at what places, of whom, and at what prices they should procure them; and further, that he might purchase them himself.

It was submitted by the Judge Advocate (see pages 4 to 7 of his "Reply") that the acts of Congress of April 16, and July 17, 1862, limited the authority of the Surgeon-General to the direction when to purchase, and the kind and quantity to be procured; that, having given this direction, his lawful authority was determined, leaving to medical purveyors, under bonds for the proper discharge of their responsibilities, the whole duty of selecting in such markets, and of buying from such persons, and upon such terms as their judgment dictated.

The former of these enactments provides "that medical purveyors shall be charged, under the direction of the Surgeon-General, with the selection and purchase of all medical supplies, including hospital stores," &c., &c.

The latter makes provision that medical purveyors shall give bond, with approved security, in such sums as the Secretary of War shall require, for the faithful performance of their duties.

It would seem, from the express language as well as from the reason of the law, that the position taken by the Judge Advocate was correct, and the decision of the court upon this issue was warranted. But it is deemed unnecessary to bestow further consideration upon this question. The findings of the court, that the accused ordered the purveyors to purchase supplies of inferior quality, well knowing them to be such, and to purchase articles at exorbitant prices, with corrupt intent to aid in defrauding the Government, and that he ordered the purchase of "additional large supplies," "corruptly," and "with intent to aid" certain persons "fraudulently to realize large gains thereon," impute much more than a

mere technical over-stepping of the limits of the enactment of April 16, 1862. They convict him of official corruption, abuse of power, and a gross breach of public trust.

The proof upon which these findings are based was offered in support of the 3d, 4th, 5th, 6th, and 7th specifications to the first charge. It is not requisite in this report to collate and comment upon it. The full presentation of the whole case by the Judge Advocate relieves this office of the necessity of entering into that detailed discussion of the facts and legal questions involved which, under different circumstances, would have been proper.

In his "Reply," and the "Defense" of the counsel for the accused, both of which are printed and attached to the record, the important portions of the evidence and all the prominent features of the proceedings are presented as concisely as the voluminous character of the testimony would admit.

That the natural and necessary result of the acts of the accused, as established by the record, involved a criminal spoliation of the Government treasury, which would alone have called for his dismissal from the service, cannot be denied; but when it is remembered, as shown by the proof, that this spoliation was in part accomplished by the purchase of inferior medical supplies and stores —thus compromising the health and comfort, and jeopardizing the lives of the sick and wounded soldiers suffering in the hospitals and upon the battle-fields of the country—soldiers solemnly committed to the shelter and sympathies of the office held by the accused, by the very law and purpose of its creation—it must be admitted that this fearfully augments the measure of his criminality.

The trial, which lasted nearly four months, was one of the most patient and thorough that has ever occurred in our military history; and the accused had throughout the assistance of eminent and able counsel in conducting his defense. The court, which was composed of nine general officers, at the close of this prolonged investigation, declared him guilty of the charges preferred, and awarded the punishment which, in their judgment, was in accordance with the nature and degree of the offenses committed; and a careful examination of the record leaves no room for doubt as to the validity of the proceedings, or the justness of the findings and sentence.

J. Holt,
Judge Advocate General.

The following is the President's order confirming the sentence in this case:

"The record, proceedings, findings, and sentence of the court in the foregoing case are approved; and it is ordered that Brigadier-General William A. Hammond, Surgeon-General of the United States Army, be dismissed the service, and be for ever disqualified from holding any office of honor, profit, or trust, under the Government of the United States.

"A. Lincoln.

"August 18, 1864."

Bibliographical Notices and Reviews.

Memoranda on Poisons. By THOMAS HAWKES TANNER, M.D., F.L.S., Assistant Physician for the Diseases of Women and Children to King's College Hospital, etc. From the last London Edition. Philadelphia: Lindsay & Blakiston, 1864. Pp. 116. Price 50 cts. Author of "A New Manual on the Practice of Medicine," and also of "A Practical Treatise on the Diseases of Infancy and Childhood."

This work is intended to refresh the memory of the practitioner on a subject which is not brought under his notice so frequently as many other departments of medicine. The reader, by consulting this work, may see at a glance the treatment to be adopted in each particular instance of poisoning to which a medical man is liable to be summoned.

The writer of this little volume seems to think the crime of slow poisoning is pretty extensively practiced in the present day. This work will assist the physician very materially in ferreting out the villainous administration of deadly drugs.

Toxicology is a branch of medical science which discusses the nature, properties, and effects of poisons. Various attempts have been made to define a poison, but none of them will bear a critical examination. Most medicines are poisonous in improper doses; indeed, almost anything in improper quantities or taken at an improper time may be regarded as approximating the character of a poison. The law regards any substance as a poison if given with the *intent* to do mischief.

"Whoever shall administer or cause to be taken by any person any poison or other destructive thing, with *intent* to commit murder, shall be guilty of felony, and being convicted thereof, shall suffer death." Another act provides for the punishment of a prisoner "should life be endangered or grievous bodily harm result."

The following, on the Diagnosis of Poisoning, may be regarded as a fair sample of the work:

"DIAGNOSIS OF POISONING.—The chief characteristics of poisoning mentioned by authors of repute, are that the symptoms commence suddenly, after taking

any substance or fluid into the stomach, the individual being in a state of health; that they increase steadily, and are uniform in their nature throughout their course; and that they prove rapidly fatal. There are many exceptions to these rules. Thus, if the stomach be loaded the appearance of the symptoms will often be delayed some few hours. Sleep, according to Dr. Christison, may retard the action of some agents; so that if a person fall asleep soon after swallowing arsenic or strychnia, for example, no effect may ensue for four or five hours. Intoxication will mask the effect of narcotics. Again, the individual poisoned may be suffering from disease, and an agent may be given which will only aggravate existing symptoms; or sometimes a poisonous draught is substituted for the harmless medicine. And lastly, after a poison has manifested its effects, the symptoms often remit for a time.

"When a poison is administered with a criminal intent, it is generally in such a dose as to take immediate effect; although this is by no means necessary, as there are numerous substances which accumulate in the system, and when given in small and repeated quantities, ultimately prove fatal. It must also be remembered that there are many diseases, as malignant cholera, internal hæmorrhage, &c., which commence suddenly, and rapidly run to a fatal termination. In inflammation of the stomach or intestines the symptoms often set in suddenly, and might be mistaken; and such is also the case in intestinal obstruction, and especially in ulceration and perforation of the bowels. So also in organic diseases of the heart, where the symptoms may have remained latent for some time, death often occurs suddenly from syncope. The diagnosis of the effects of irritant poisons is not so difficult as it is in the case of narcotics or narcotico-irritants, where the symptoms are very similar to those produced by apoplexy, epilepsy, tetanus, convulsions, and disease of the brain.

"Generally speaking, a person may be supposed to be poisoned, if after taking food or drink, he be seized with violent pain, vomiting, disorder of the alimentary canal, and convulsive movements: or if he be attacked under the same circumstances with vertigo, delirium, or great drowsiness. It must not be forgotten, however, that poisons may be introduced into the body by means of enemata, or in females by vaginal injections, or by inhalation, or through the true skin after the removal of the cuticle. Should death ensue, the presumption of unfair play will of course be strengthened by the discovery of post-mortem appearances similar to those known to be produced by the poison from which the person apparently suffered.

"The post-mortem appearances, however, except in a few instances, are by no means to be relied upon; and the two symptoms, excessive lividity of the body, and early putrefaction, formerly supposed to indicate death by poison, are now known to be as frequently produced by natural disease. It may nevertheless be generally remarked, that the appearances after death, which may be produced by poisons, are in one great class, the signs of inflammation of the alimentary canal; in another, the signs of congestion of the brain; and in a third, a combination of the two.

"The detection of poison in some of the food which has been taken, or in the matters vomited, would seem to be conclusive evidence; but it is to be recollected that designing persons have mixed noxious materials with food or rejected matters, in order to feign poisoning, or to cast unjust imputations upon others.

"When a practitioner is called to a case where death is supposed to have resulted from poison, he ought to make written notes of his observations. He should inquire the time at which any substances was last taken, the nature of the symptoms and the hour at which they commenced, and the precise time at which death occurred. He must take possession of any food, medicine, vomited matters, urine, or fæces which may be in the room; and, if possible, he is to seal them up, in clean vessels, duly labeled, for examination. Any *voluntary* explanation by the attendants is to be noted. Then the position and temperature of the body are to be observed, the appearance of the countenance, the presence or absence of rigor mortis, with the nature and warmth of the apartment, the situation of any marks of violence, and the condition of the inside of the mouth and gullet. If the examination is to be carried further, as it ought to be, the œsophagus and stomach, with the contents, must be carefully removed for analysis: the contents of the duodenum are to be taken in a separate clean vessel: the mucous lining of the intestines is to be carefully looked to, particularly that of the rectum: and, in women, the vagina, uterus and ovaries must be inspected. The brain, spinal cord, and thoracic viscera ought likewise to be examined: and a portion of the blood, liver, spleen, kidneys, and muscles should be reserved for analysis. No antiseptic or preservative fluid is to be used. When possible it will be better to make the autopsy within twenty-four hours after death; taking care to do so patiently, thoroughly, and free from any bias. Poison may be found in a body, and yet a question may arise as to its having been the cause of death. Hence in these investigations every organ of the body is to be examined, in order to learn whether any disease has existed sufficient to account for the fatal result.

"If proof can be given that a person has died from the administration of a poison, it is not necessary that the poison be detected by chemical analysis to insure the conviction of the party guilty of giving it. Setting aside the fact that the poison may have been expelled from the system by excessive vomiting or purging, or that it may have been eliminated by the kidneys, or that it may have been decomposed in the body, the substance may be one that in the present state of science chemists are unable to detect in the tissues. This is especially the case with many vegetable matters, and with the powerful alkaloids extracted from them. It is in such instances, more particularly, that experiments on animals are sometimes made; though care must be taken not to place too much reliance upon the results. Dogs, cats, guinea-pigs, mice, and frogs are the animals usually selected for trial; and the experiments may be made with the suspected articles of food or drink, or with the matters vomited, or with the flesh of poisoned animals. In drawing up a medico-legal report the observations must be made under three heads,—the symptoms during life, appearances after death, and the chemical analysis. The exact time and date is to be given, the simplest language is to be used, and the report is to end with the conclusions drawn from the facts. The practitioner must remember that he will probably have to appear in the witness-box, when every expression he has adopted may be roughly criticised. Let him recollect, too, that he is merely a skilled witness —a calm, truthful interpreter of scientific facts. As he is neither a judge nor an advocate, so he must curb his imagination; and especially should he beware of straining the data afforded by his investigations in order to serve any particular object."

The Pathology and treatment of Veneral Diseases; including the results of recent investigations on the subject. By FREEMAN J. BUMSTEAD, M. D., Lecturer on veneral diseases in the College of Physicians and Surgeons, New York; late Surgeon to St. Luke's Hospital; Surgeon to the New York Eye and Ear Infirmary. A new and revised edition. With illustrations. Philadelphia. Blanchard and Lea, 1864.

We are gratified, but not surprised, that a new edition of Dr. Bumstead's treatise on veneral disease should be so speedily called for by the entire exhaustion of the first, which appeared only two years since. A work possessing so many claims upon the practitioner as well as the student, and supplying a dissideratum acknowledged by all, we felt could not be long in winning its way to popular favor.

When this work first appeared we made a somewhat extended analysis of its contents, especially with reference to its teachings in regard to the new pathological views of the author, derived, as he states, mostly from the modern French school, and predicted for them a complete and permanent success. Our predictions have happily been verified. The views here set forth are now those of all leading authorities.

We notice that the author has divided his work into three parts, in place of ten, as in the the former editions; making it thus conform more accurately with the natural divisions of the subject, viz: Consisting of Gonorhœa, Chancroid, and Syphilis rejecting as illogical and indeterminate the old terms "soft chancre" and "hard chancre." This change necessitated the re-writing of a considerable portion of what constituted the second part of the first edition. We also notice, in looking over its pages, that, as the author remarks in his preface, "the practical portion of the work has also undergone important alterations on various topics, among which may be mentioned the treatment of stricture by the immediate plan of Mr. Holt; the abandonment of specific remedies in most cases of initial lesion of syphilis; the preference given to the external rather than the internal use of mercury in secondary and tertiary syphilitis; and the necessity of trusting to nature, aided by hygienic influences, and not to treatment indefinitely prolonged after the disappearance of all syphilitic manifestations, to eliminate the virus from the system." These various alterations and additions bring the work up to a level with the most advanced state of

our knowledge of the subject, and leave in this respect nothing to be desired.

The author expresses his surprise that the success of the work should have been so considerable in a time of civil war, when medical literature, except on military subjects, is supposed to be almost stagnant.

We do not concur with the author in this view of the subject. If the war has not already, it certainly will increase the demand for works of this kind. Licentiousness, in proportion to the means of indulgence, has always been a vice common to armies, and probably *par excellence* to the army and navy of the United States. The extreme prevalence of all forms of veneral disease among our returned volunteers is well known to most physicians; it is carried by them into rural districts and places where under the former conditions of things it was scarcely known to exist.

Physicians occupying these remote localities, whose attention heretofore has scarcely been directed to the subject, will be called upon to treat this disease in all its protean forms. We cannot do them a greater favor than that of directing their attention to this work. A familiarity with its teachings, and ample directions for treatment, will save them from many mortifying blunders and humiliating failures, and prove abundantly remunerative even in a pecuniary point of view. The work is ably and handsomely illustrated, and the paper and typography leave nothing to be desired in this respect. R. D. D.

Editorial and Miscellaneous.

Surgeon-General Hammond.—In this number we publish the result of the trial of Surgeon-General Hammond. The affair goes to the public from the authorities at Washington, and in a way that not only makes a sad impression upon the reader, but leaves little hope that any thing that may be offered in the way of extenuation by Doctor Hammond or his friends, can prove of avail. Doctor Hammond, however, some time since asked a suspension of public opinion on his case until he had time to give a full expose of all the facts in connection therewith. Cheerfully, most cheerfully, will this request be granted, and in the meantime the hope will be indulged that he may prove equal to the emergencies before him.

In this connection, may we not ask the reason why the "*Calomel Tartar-Emetic Order*" still stands in force? The present Surgeon-General should look into this matter, for the profession may be inclined to hold him responsible in the event that no action is taken on his part touching the removal of the offensive measure from the list of hospital regulations.

The profession in the army has been disgraced by this Order, and the sooner it is dispensed with the better. The idea of tieing the hands of the surgeons of the army with reference to the use of drugs!

The University Medical and Surgical Journal of Philadelphia.—A periodical of the above title has been laid on our table. On first noticing it we supposed it emanated from the old and renowned University, and had an agreeable emotion or two on the supposition that we were about to have a very nice addition to American journalism. On turning, however, through the leaves to get a glimpse of tendencies, we noticed under the head of "*Association vs. Progression*" what seem to be satisfactory. The work is to be devoted to the great business of taking apart all existing things, and after this to their reconstruction on different principles. Every thing in the sciences, we are informed, and especially in medicine, requires regeneration, in order to be in harmony with

the influences, social and political, that are agitating society!! Besides, selfishness, intolerance, and bigotry characterize all our associations to an extent that destroys their usefulness and confines them to a narrow system of philosophy! The days of the aristocracy of learning are numbered! General intelligence, with which the masses are so liberally endowed, will no longer submit to the annoyance of a pretended and self-constituted literati.

Such is the talk of this new-comer among medical periodicals. We have heard something of the kind before. Of course old institutions and all other old things ought to be abandoned. Why not commence *de novo* in every thing—in anatomy, chemistry, therapeutics? Why attempt to preserve any thing that has been accumulated? Why not let the work of disintegration, now so prosperous, go on until it does its perfect work?

Badinage aside, the appearance of this and similar publications within the past year indicate very positively that humanity in certain regions is not in a very happy mood with reference to existing things, and that it is the intention to make a change. It might be well enough for the projectors of these publications to look at themselves a little; such an operation may do them good. It's so nice to be able to see ourself.

This journal, we suppose, comes to us for "exchange." We will give the matter, of course, careful consideration. But just now we fail to see how we are to be benefitted by the operation.

Starling Medical College.—The next session of this Institution commences on Thursday, the 20th October, 1864, and will continue until the 1st March, 1865.

The dissecting rooms, now elegantly lighted up with gas, will be open on the 1st October for the study of practical anatomy. The fees are the same as heretofore. Boarding and other accommodations will, perhaps, be found as reasonable in Columbus as any where in the West where Medical Colleges are located.

Hospital privileges in Columbus are now very good. The Ohio Penitentiary, County Infirmary, and the Military Hospitals of the city furnish a large amount of material for clinics. Besides, there is now very good reason to expect that the hospital wing of the College building will be occupied by the Sisters of St. Francis as a charity hospital during the present session.

American Thermaceutical Association.—This body meets in Cincinnati on the 21st of September next. This is its Twelfth Annual Meeting. The Committee of Arrangements have selected the Catholic Institute as the place where the delegates will meet.

The British Thermaceutical Conference will hold its Second Annual Meeting in the City of Bath, England, on the 14th of September.

The *Eighth French Thermaceutical Congress* was to have met on the 17th of August at Strasburgh.

In chronicling the passing condition of the public health we would note the more than usual dispositions to disturbance of the bowels during the past summer months and commencement of autumn. In common with many other parts of the country, we have experienced, during the months of June and July, a period of unusual drought and a range of extremely high temperature. Its relaxing and debilitating effects produced an extensive prevalence of cholera-morubs and dysentery, and told with fearful and fatal effect upon an infantile population in the production of cholera-infantum. We have, unfortunately, no means of arriving at the vital statistics of our vital population, but feel very confident that at no previous history of our city has the mortality of children been greater than during the present summer.

At this date the character of our diseases has changed, the ordinary autumnal remitting and intermitting fevers being the prevailing type. This is due to great extent to the frequent and heavy rains we have had during the past four or five weeks. Apart from the somewhat extended prevalence of these fevers, our community enjoys its wonted good health.

Is Ovariotomy Justifiable?

[To the Editor of the American Medical Times.]

SIR—The reasons offered by Professor Peaslee, in a recent number of your journal, in regard to the question, "whether ovariotomy ought to be recognized as a legitimate surgical operation," do not, as it seems to me, cover the whole ground. The question is by no

means wholly a *statistical* one, as he seems to take for granted. It is one in which the *heart* and *conscience* are as much, if not more, interested than the head.

We all know that our great master in surgery, Mott, has never performed ovariotomy. Have the advocates for this operation ever inquired why he has not? Does any one suppose he is ignorant of ovarian statistics? Or that Professors Meigs, Mutter, Liston, Duncan, the French Academy of Medicine, as well as nearly all the great surgeons of the age in all countries, are also ignorant on this point, and hence have regarded ovariotomy as unjustifiable? Did statistics show even more favorable results than they do, there is no reason to suppose that they would regard the operation in any different light. Our surgeons do not decline this operation because it is difficult, or requires any particular skill or anatomical knowledge; on the contrary, it is one of the simplest in all surgery. But they are unwilling to be instrumental in shortening human life, when there seems to be no evident necessity of taking such risk; they will not endanger their peace of conscience by undertaking a surgical experiment where a fatal result is as one in three; when, without such experiments, the patient may perhaps live for years in comparative comfort, and possibly recover. They do not think it right to frighten females afflicted with ovarian diseases by predicting a fatal result without an operation, and that at no distant period; and then try to quiet their own consciences by leaving it *entirely* to said females to decide for themselves whether they will submit to an operation or not. I have never had the hardihood to perform ovariotomy; and I shall always have a higher opinion of the late Professor ———, who, after opening the abdomen of a female afflicted with an ovarian tumor, immediately closed it without an attempt to finish the operation, previously saying to those present that if there was any surgeon in the room who would like to finish the operation, he would be glad to consent to his doing so. This female lived fifteen years after in the enjoyment of very comfortable health. But the professor never made another attempt at the same operation, and always condemned it in his lectures.

I may further urge in my own behalf, as well as that of my surgical brethren generally:—1st. That the diagnosis in a majority of cases of ovarian diseases is very obscure, and that the prognosis is to the same extent doubtful, if not unfavorable. 2d. That many

females carry these tumors through a long life with comparatively little inconvenience; that in many cases they actually diminish in size, while the inconveniences attending them often nearly disappear. 3d. That the most favorable statistics show that nothing is gained *on the whole* as regards the prolongation of life by the operation; for it is found that, taking an equal number of females affected with ovarian tumors of equal ages and under as nearly as possible similar circumstances, *the average duration of life will be greater in those on whom the operation has not been performed than in those who have submitted to it.* So that *statistics*, in fact, condemn the operation as unjustifiable. 4th. In all the other great operations the surgeon has no misgivings; he is laid, as it were, under *duress*, as Professor Meigs would say, to operate if circumstances required, and he has no severe qualms of conscience should the case prove afterwards fatal. 5th. Far otherwise, however, must it be with every properly constituted mind when a fatal result attends an operation as wholly unjustifiable by the highest authorities in surgery, and by nine-tenths of the profession generally. 6th. From what has been offered, it may safely and justly be inferred, that our principal surgeons do not envy the professional reputation acquired by the operation in question; they do themselves honor by showing that they have studied ethics in a wiser school, and that they prefer peace of mind and a good conscience to transient notoriety and pecuniary rewards. P.

Remarks on the Social and Sanitary Condition of the Onondoga Indians. By JONATHAN KNEELAND, M.D., of South Onondaga, N. Y.

The Onondaga tribe of Indians occupies a reservation lying on the Onondaga Creek and on a high ridge adjacent. This tract, secured to them by treaty with both the National and State Governments, contains about 5,000 acres of good land. The valley, in which they nearly all reside, runs north and south, is about 800 feet above tide-water, eight to twelve miles south from the city of Syracuse, and the soil is in the green shale and slate formation which underlie the Onondaga lime-group of rocks. Their reservation extends east, embracing a hill which rises some 1,700 feet above tide-water, and reaches from the Onondaga water lime-

group, and grey and blue Onondaga limestones which form its base, to the Tully limestone (of the State survey) which crowns its summit, embracing the entire formation called the Hamilton slates, which lie between the Onondaga and Tully limestones. This locality has been the home of the Onondagas since the earliest records, and tradition makes it the centre or rallying point for Indian councils ever since the Aboriginal Confederation, known as the Iroquois or Six Nations, was formed some four hundred years ago.

This tribe, which, in the time of the American revolution, could raise and must have numbered 3,000 or 4,000 warriors in all, is now reduced to about 300 souls. The Chiefs, who seem reluctant to acknowledge their decadence, say, "Some Onondagas gone to live with the Mohawks in Canada; many more are with western Indians at Green Bay and farther west; and some gone to your big war;* come back no more."

All these allowances being made, there are not as many hundred Onondagas on the face of the earth now as there were thousands ninety years ago. I propose to glance briefly at the physical and pathological causes of their decline, and, it may as well be said, OF THEIR FINAL EXTINCTION.†

* About twenty-five Indians of this tribe have been induced by bounties, whisky, and martial music, of all of which they are very fond, to enlist in some one of the many regiments of volunteers raised since the outbreak of the great rebellion, in Onondaga, Cayuga, Madison, and Oneida counties; and twice has the council of Assembled Chiefs deputed their best diplomatists to visit Washington; and, by their personal importunity with the President and Secretary of War, these Indian soldiers have been released and returned home to their tribe, again to enlist, take larger bounties, and be again discharged by the power of Indian palaver with our good-natured (to Indians) Chief Magistrate; but one has been killed in battle, and none have died of wounds or disease to my knowledge.

† The inordinate use of tobacco, it being given to children as we give candy or sugar to quiet them and to hire older ones to do unpleasant duties, together with the general prevalence of the use of intoxicating beverages, are among the causes of physical degeneration; and their gross and irregular habits of eating, varying from surfeit to starvation, operate to render the proper nursing and care of their sick and feeble ones, if they do not really lower the powers of vital existence among the well. Within two years five deaths have occurred in the tribe by lying out cold nights when drunk; three of the five, strong young men, found frozen in the morning; the other two men died in a day or two after lying out drunk.

It is said small-pox was unknown among them previous to the settlement of this country by the whites; and it is gravely asserted by one of the Puritan chroniclers of the early settlement of New England, "that an epidemic of small-pox broke out, and spread throughout all the tribes on the Atlantic coast, and far inland, just prior to the landing of the Mayflower." He says further, "This seems to have been sent by God to thin out these barbarians and weaken them to make way for us." He admits, however, that the disease, before unknown, was communicated by a ship's crew which landed on the New England coast to trade with the natives three or four years prior to the first settlement of Plymouth. This disease has, within thirty years, prevailed among the Onondagas at three different periods, and caused many deaths. Vaccination has not been introduced, except to a small extent, and that within the last six years; they are the most difficult people on earth to be led into measures of a prophylactic nature, and never can be induced to have their children vaccinated except when imperilled by exposure or contiguous prevalence of small-pox. It has been said that small-pox has decimated this tribe within thirty years, and if we count those who have died with the immediate attack or remote consequences, I believe it. Syphilis assumes worse forms here than among the whites of our inland towns and cities, and deaths occur every year from some of the protean forms of this malady. Its ravages as a congenital disease are great among the Indian children. Abortion is seldom purposely caused by medication or instruments among the squaws, who all desire to be mothers *early*, mothers *often*, and mothers LATE; which may be, in part, from mercenary motives, as each child draws an annuity of five dollars cash, and blankets worth as much more, from the National Government at Washington. The pride of maternity and the fondness for children and pets, is intensely strong among them; the ratio of those who die in infancy is, however, very large; many fall victims during the first year of life to syphilitic anæmia, attended in some cases with secondary eruptions and ulceration. Scrofulous diseases are very common among the children and youth, and oftenest seen in the glandular system, and next in affections of the bones and joints. The percentage of deaths from pulmonary tuberculosis is very large. During the ten years of my acquaintance with the tribe, many young men and young women, from the ages of fifteen to twenty, have died of consumption within a few

months after marrying, which they are sure to do, in fact or in form, as soon as the development of the procreative organs will warrant.

A fact growing out of these early marriages, or conceptions from commerce of immature parents, is, that the children of these young parents are seldom reared, but die of scrofulous or syphilitic maladies developed during the teething months; or, if they are carried through childhood, many of them are scarred, semi-idiotic, or crippled by these diseases, and will doubtless fall victims to their subsequent development at about the season of puberty or when growth ceases. The degeneration and inherited feebleness of constitution which have finally caused the native inhabitants of the Island of Malta and other secluded islands, and of certain mountain valleys in Europe, to run out, or, with but few exceptions, to only propagate dwarfs, cretins, and imbeciles, are in full operation in this tribe. Marrying in and in, or incestuous commerce, immaturity of parents, and the fact that scrofulous and syphilitic parents transmit to their offspring these diseases or their enfeebling consequences, are working out here the same results as elsewhere The great laws of population are as imperative among the tribes of men as among the inferior animals, where we see weakly and infirm parents are forced to give place to the strong and healthy; and where whole species of families become unable to protect themselves from the war of the elements, or the encroachment of more vigorous and self-asserting families of the same species, they give place, and vigor triumphs over decay. It might seem exceptional in the case of Indians to the general law that "procreation between near relatives tends to impair and destroy the race," that the half-breeds, one of whose parents is part or all white, are generally short-lived, do not seem to be saved from decline by the infusion of white blood. Whatever may be the reason of this (perhaps depravity of taste is generally associated with syphilitic or other taint in the white parent), it is notorious that the children of both Indian parents, one of whom is from a distant tribe of Indians, are the most healthy, while half-breed white children and full-bred Onondagas are alike infirm or prone to yield to attacks of disease.

The state of medical knowledge among these Indians is briefly told:—They have but little knowledge of either remedies or diseases, and it is a marvel that any person should ever have sought to add to his popularity or that of his especial cure-all, by calling

himself an Indian doctor, or his panacea an Indian remedy. Podophyllum peltatum, macrotys racemosa, hamamælis virginica, apocynum cannabinum, and spigelia marylandica are *the chief remedies* in use among them from the vegetable kingdom. Add to these a few showy, rare, inert plants, with Epsom salts and castor oil, and you have their stock of materia medica; and more than half of these remedies, probably all of them, have been taught them by their white neighbors.* They have a chief who glories also in the title of Indian doctor, and who circulates among some of the more ignorant whites in this and one or two adjacent counties, a few roots, leaves, and barks, given in decoction in large quantities of warm water, or infused in rum or whisky; and boasts and pretensions, indicating his near relationship to Longfellow's "Jagoo the boaster," constitutes his stock in practice. There are a few squaw doctors, who practice in substantially the same methods in the tribe, but none of them practice surgery, or even extract teeth or adjust broken bones or dislocations.

The absence of skill in surgery and midwifery among these Indian doctors is so well known in the tribe, that they have formerly, in bad cases, depended on nature, with what aid they might be able to obtain gratuitously from neighboring white physicians. About seven years ago, through the agency of some neighboring physicians and other benevolent persons who witnessed their destitution of medical skill or the means to secure it,† the Legislature

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* There is among the Senecas an educated Indian Doctor named Wilson, who graduated at Geneva Medical College many years ago; he occasionally visits this tribe, and is a man of some talent and skill, but his usefulness among the Indians is limited, owing to his habits. Schools and Protestant Missions have only been established among the Onondagas some eighteen or twenty years; they are therefore less intelligent than the Oneidas, Senecas, and Tuscaroras, who have enjoyed these means of improvement much longer. It is also said by agents, teachers, and missionaries, that the Onondagas are duller scholars and more generally indolent and depraved than any of the above-named tribes.

† The Indians being by treaty a nation by themselves, could not be pauperized—so said lawyers and auditing town and county boards; were not suable at common law; their property could not be levied on by execution; and they never had either money or other means ahead; consequently no debts were paid by them; their fertile lands were rented to whites, paid for in advance, and the money soon spent for gewgaws, travel, whisky, and short-lived luxuries; they then live for months by a system of beg-

was petitioned, and a law was passed in 1858 giving them a physician's services in urgent need—his salary not to exceed $300 annually, paid by the State. Since the passage of this statute I have been called three times to use the forceps in cases of midwifery, and have seen much of their bad surgery, or rather no surgery. I have never seen a one-legged or one-armed Indian among them; for many years no amputation has been performed on an Indian of this tribe. The reason given by their head chief, a most intelligent man, Harry Webster, was, "that Indians always die when you cut off their legs or arms," and indeed it seems well established that they have generally sunk after any grave operation. The trophies of conservative surgery, with the surgery left out, are numerous in the tribe in the shape of distorted and deformed limbs; legs and arms are seen anchylosed at almost every conceivable angle. Some of these might have been saved from deformity by judicious mechanical appliances, instead of which they apply hot fomentations of macerated barks and pounded roots, never having learned to combat inflammation of the joints by cooling applications or leeches, or to obviate the distortions and contractions which follow these inflammations by mechanical means.

One case of midwifery, in which resort to the forceps became necessary, amused me, and may serve to illustrate the stoicism and queer humor of this most grave-looking race:—The squaw had been in labor with her first child over thirty hours; all the obstetric skill of the tribe had been in attendance upon her more than twenty hours. She seemed much fatigued. When I was called, I however soon succeeded in removing the impacted fœtus with the forceps. After separating the child, which proved to be alive, and removing the placenta, I left the woman on some husks and quilts on the ground, in the centre of the cabin, while I washed my hands in the snow at the door; on returning to see whether my patient rallied well, I found the bed (such as it was, where she

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gary, until they can again rent their lands or send out squaws with baskets, bead-work, and begging papers. The doctors contiguous to the tribe had attended them almost wholly without compensation for many years, until they, in 1858, secured $300 annually from the general fund, the Legislature justly regarding the care of the needy and indigent sick Indians as properly a duty owing by the State as the pay of teachers and support of Indian schools.

was left lying to rest, while I stepped to the door) was gone, and all the squaws, with the husband of the parturient woman, seated on a board or bench at the side furthest from the door, the squaws with the woolen blankets which they always wear drawn over their heads, all sitting in a row, and looking as much alike as the beans in a pod. My patient, one of the five, I could not at first recognize. Seeing my surprise, they all laughed heartily, when I knew my youngest mother by her teeth being younger and her laugh a shade quieter than that of her nurse and midwife attendants.

They said to me, "White woman no have baby to-night, and go to meeting to-morrow like Indian woman."

I acknowledged the truth of this, and believed the squaw mentioned in Irving's "Astoria" might really have given birth to a child in the afternoon, strapped the youngster to a board and mounted her pony, and traveled on with the moving cavalcade of Indians* the next morning. They are the most utterly free from nervousness, hypochondria, and hysteria, of any people known to me. Anæsthetics would be of but little use for them, as they seldom give utterance to cries of pain—a sort of guttural sound or smothered groan being the only indication of the presence of severe parturient throes. I have, however, seen three cases of cataleptic unconsciousness in mothers, caused by grief on the loss of promising children. In one of these the mother had lost her

* The Onondagas retain the custom which was prevalent among the Indians at the first settlement of this country by the whites, of binding the papoose to a board, fashioned often with cunning workmanship, and over the upper end of which projects a strong bow to keep the blanket from the face, and also to serve as a handle to lift it to and from their shoulders when they travel; it was also used, as we learn by the old couplet, "Rockaby baby on the tree top," etc., to suspend the child by to a limb or sapling bent down, which would give it a motion decidedly soothing when swayed by the wind. This way of rocking the baby is now sometimes used by Indian mothers here while they hoe or plant in warm weather. This binding the child firmly by cloths, its back to a board, must influence the form of the spine, and may serve to account for a straightness almost abnormal; hence the saying, "Straight as an Indian;" and does it not also secure the shape of the neck of the femur, which makes all Indians point their toes straight forward, as much in as the heels, when they walk? Or is this direction of the foot in progression wholly inherited from parents of like formation and motion?

husband and two children of cerebro-spinal meningitis, within a few days, the last dying while they were after me, they having before had no doctor but their own; the mother had begged for a "white doctor," and on the child's dying before my arrival, "she fainted." I found her rigid and unconscious; her jaws set; pulse feeble and about 60 per minute; she did not recover so as to swallow in many hours; and died of dropsy, supervening upon pericarditis, in a few months after the death of her children.

All epidemics of scarlatina, small-pox, measles, brain fever, or cerebro-spinal meningitis, are more fatal with them than with any race of whites in this region of country. This may be in part due to the physical degeneration of the tribe, and in part to the want of proper nursing, food, and care when sick. It is probable that being able, as they now are, to secure the aid of a physician when an epidemic comes among them, they may by degrees place confidence in "white doctors," and heed directions as to food and nursing, to which they now pay little regard, and that their final extinction may be delayed by the same agencies which have increased the average duration of human life among civilized nations, viz., knowledge of, and obedience to, the laws of life. Industry, economy of means and time, and reliance upon their own labors and their fertile acres for their support, should be taught them instead of having their teachers, preachers, books, stationery, and blankets hired and bought by the State, the Church, and the General Government; but ere these radical changes in their nature and habits are effected, the Onondagas will have passed away.

South Onondaga, May 31, 1864. [*Amer. Med. Times.*

Resection of one inch of an imperfectly united Tendo-Achillis, and successful treatment by Sutures. By WARREN WEBSTER, M.D., Asst.-Surgeon U.S.A., in charge of De Camp General Hospital, David's Island, N. Y. Harbor.

We are told that when a tendon is divided in an open wound, reunion of the two ends rarely takes place, in consequence of the violence of the resulting inflammation preventing adhesive action. Whether the failures of most of the earlier operations of tenotomy depended upon this cause, or were mainly due to the neglect of the surgeon to maintain the divided extremities in apposition during

treatment, the following report of a case may assist to determine. It will be seen that free exposure of the divided ends of the tendon to suppuration, was not in the present instance incompatible with a successful cure. The employment of sutures, to assist the relaxed muscles in maintaining the divided extremities of the tendon in contact during the cure, is also a feature of interest in the case.

Paul, a half-breed, applied to me, while post-surgeon at Fort Larned, Kansas, in November, 1860, for the treatment of an injury which he had received about three months previously while engaged in running a foot-race. His statement was that he felt something, at the time of the injury, suddenly give way in his right leg, with an audible snap, the part being instantly deprived of its functions. He said that a well marked interval or hollow was perceptible above the heel, and in attempting to step upon the foot after the injury, he immediately fell to the ground. No attempts were made to bring the divided ends into proximity with each other, by relaxation of the affected structures, and but little attention had been paid to the subsequent quietude of the limb. At the time of my examination there was an intervening gap between the divided ends, of about an inch in length, where but little plastic matter seemed to have been poured out to fill up the space. The uniting bond was so elongated and weak as to render the limb powerless in progression. I resolved to expose the parts by a free incision, remove the slight connecting medium, pare the retracted extremities, and endeavor to unite them by the introduction of sutures of silk. The operation of bringing the severed ends in contact after the removal of the intervening substance was attended with considerable difficulty. This, however, was accomplished by placing the limb in a thoroughly relaxed position, and inserting two strong ligatures through the ends of the tendon about three lines from the extremities. The parts were thus approximated, and the relaxed position of the limb was maintained by an apparatus consisting of a ring of leather placed around the thigh, above the knee, from which a cord was attached to a loop in the back of a slipper. The gastrocnemii muscles were also surrounded by a firm bandage. The apparatus was used for six weeks, when the patient was allowed to walk about, wearing a high-heeled shoe, for three weeks longer.

After having tied the ligatures, one end of each was cut off and the others withdrawn, as practised in the ligation of vessels. The

incision was then united its entire length (which was about three inches) in the most exact manner possible. The ligatures were removed on the twenty-fifth day, and during the greater part of that time the wound discharged purulent matter. The fourteenth week after the operation the patient walked with scarcely any lameness, and the tendo-achillis appeared to be perfectly united. —*Amer. Med. Times.*

On Iodine as a Deodorizer and Disinfectant. By Dr. B. W. RICHARDSON, M.A., London.

The following is from a report of papers read at the late meeting of the British Association at Newcastle :—

Dr. Richardson made a short observation in sub-Section D on Thursday, August 27, "On the application of Iodine for Disinfecting and Deodorizing Purposes." The iodine should be placed in a common chip-box, such as is employed by pharmaceutists, the lid of the box being replaced by a covering of "leno," or the iodine may be placed in the ornamental vases on the mantle-shelf of a room. The smell of iodine could thus be communicated to the air of an apartment, and air so purified was not only fresh and agreeable to the sense of smell, but any organic matters in it were destroyed. In extreme cases the iodine should be placed on a dish or plate, and the heat of a candle being applied beneath, the iodine was volatilized, and a room was quickly purified. Dr. Richardson said that in cases of small-pox a knowledge of the facts he had named was most valuable. In rooms occupied by sufferers from this painful disease, organic matters floated largely in the air, rendering the air most offensive. He (Dr. Richardson) had succeeded, in all cases, in rendering such air inodorous by the volatilization of iodine. He had also observed the singular fact, that when the air was greatly charged with organic materials, the smell of the iodine was for a long time imperceptible, so that in truth the iodine method of purification was also a ready and practical test of the purity of the air. Dr. Richardson thought the iodine plan was quite as effective as the liberation of free ozone—it was, indeed, in principle the same, and was so simple that every person could employ it.

Dr. Wood said that the iodine produced the effects named by Dr. Richardson in one of two ways—it either destroyed the organic

compounds by combining with hydrogen, and forming hodriodic acid, or it might be that in the chemical changes which occurred ozone was. In either case there was unquestionably a more rapid and effective process of oxydation, the results being the same as occurred with chlorine to a considerable extent, and in a manner more easy and manageable.—*Medical Times and Gazette.*

Fermentation and Ferments.—M. Lemaire denies that a special ferment for every kind of fermentation exists. He finds the same microscopic beings present whether sugar is being changed into alcohol, or alcohol into acetic acid. But in the case of *neutral* animal and vegetable matters he has assured himself that microzoa begin the decomposition, which, when the matters become acid is carried on by microphytes. By means of a little acid, these latter may be made to appear at will, and the author consequently argues that mycoderms do not make the acid, but appear in consequence of its presence. The acidity of the perspiration, it is thought, may cause the development of microphytes which are observed in some obstinate cutaneous effections.—*Ibid.*

Antidotes for Strychnia.—Professor R. Bellini, after conducting a long series of experiments on poisoning by strychnia and its salts, arrives at the opinion that the best antidotes are tannic acid and tannin, chlorine, and the tinctures of iodine and bromine. Chlorine, he maintains, attacks the strychnia even when it is diffused through the system, for he found that in rabbits poisoned with the sulphate of the alkaloid, on being made to inhale chlorine gas in quantity, such as was not sufficient in itself to kill, the convulsions were retarded, and were milder when they occurred; death also was less rapid. The author further observed that when strychnia was exhibited with pyrogallic acid, the convulsion was retarded for the space of half an hour, by comparison with other experiments in which the alkaloid was given by itself. Professor Bellini believes that this arrest in symptoms is not dependent on the acid acting chemically on the strychnia, but only through the astringent effects produced by the acid upon the mucous membrane of the stomach, whereby the absorption of the poison is rendered

difficult. The same author, dwelling on the frog-test for strychnia, asserts that this test is not to be trusted, inasmuch as other poisons produce the tetanic symptoms, although in a lesser degree. He adds, in speaking of the effects of the antidotes to which reference has been made, that he trusts his results will have a bearing not only on the treatment of strychnine tetanus, but on traumatic and idiopathic tetanic disease.—*British Medical Journal.*

Bromides in the Water of the Dead Sea.—Some recent analysis of the water of the Dead Sea, taken from near the embouchure of the Jordan, laid by M. Roux before the Academy of Sciences, show the extraordinary quantity of 206 grammes of salts per litre (3,090 grains in 1¾ pint imperial.) No mineral water is so loaded with saline matter or contains so much bromine. It is probable, says M. Roux, that the enormous proportion of bromide of magnesium which it contains may impart to it some special therapeutical properties. A cubic metre of this water contains more than three kilogrammes of the bromide, and it would be of great interest to try its effects in scrofulous cachexia, inveterate syphilis, rickets, diseases of the bones, chronic affections of the respiratory organs, etc.—*Medical Times and Gazette.*

External Use of the Biniodide of Mercury in Chronic Glandular and other Tumors.—Dr. M. T. Sadler calls attention (*Med. T. & Gaz.*, April 23, 1864) to this remedy, and says that he has used it, for the last eighteen months, in a great number of cases with the greatest benefit. He says he has almost invariably used it without the exhibition of any other medicine, so that whatever benefit was produced must have been due to it alone. He generally ordered it as an ointment, containing sixty grains in an ounce of simple ointment; but believes that half that strength is better for persons with delicate skins, as it sometimes causes a sensation of burning pain when used too freely. It should not be allowed to blister the skin, and when redness is produced it seems best to omit the rubbing for a night or two. It seems most useful in strumous swellings of the glands, but it is also of use in gouty swellings. The only ill effect that he has seen is the burning pain sometimes caused, and that inconvenience may apparently

be avoided by using a weaker ointment.—*Amer. Jour. of the Medical Sciences.*

Sympathetic Ophthalmia successfully treated by Iridectomy.—M. Tavignot has been led to resort to iridectomy for the cure of sympathetic ophthalmia, and he claims (*Revue de Thérapeutique*, March 15, 1864) to have successfully treated one case by this operation. The subject of it was a girl, 11 years of age, who had lost her right eye in consequence of puncture with scissors, and in whom sympathetic iritis became developed in the left eye five weeks after the accident. M. T. excised about a third of the iris at the external portion from the pupil to the external circumference of the iris. The cure, he states, was as complete as possible.—*Ibid.*

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The preliminary term will commence on Wednesday, Sept. 14, 1864, and continue to the beginning of the regular term, viz., for four weeks.

Instruction during this term will consist of didactic courses on special subjects of interest and practical importance, together with daily clinical lectures. The college lectures during this term are given exclusively by members of the Faculty. Attendance during this term is not required, but students are earnestly solicited to attend; it being designed to make this term not merely a nominal, but an actual extension of the period of instruction.

REGULAR TERM.

The regular term will commence on Wednesday, Oct. 12, 1864, and end early in March, 1865.

During the whole of the session the student will have an opportunity of attending at least two clinical hospital lectures daily. In addition to these, four didactic lectures are given on every week day except Saturday, in the college building within the hospital grounds. The didactic lectures are so arranged as not to interfere with hospital attendance. Ample time is allowed for accompanying the visiting Phisicians, Surgeons, and Obstetricians of the hospital, attending clinical lectures, witnessing Surgical and Obstetrical operations, autopsies, etc., without compromising any of the courses of didactic instruction, the latter being as complete in this Institution as in Colleges not connected with hospitals. Clinical and demonstrative teaching constituting the great feature of this College, the arrangements are such as to render the immense resources of the hospitals available to the fullest extent.

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